Becoming a Mom®

State Aggregate Report
January 2017-December 2017

Kansas Department of Health and Environment
Bureau of Family Health
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Topeka, KS 66612

Kansas Department of Health and Environment

march of dimes

KANSAS MATERNAL & CHILD HEALTH

Kansas Department of Health and Environment
Becoming a Mom®[1] Program Evaluation
Report Covers January 2017 - December 2017 Program Data
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[1] Becoming a Mom® is a prenatal education curriculum developed and owned by the March of Dimes and implemented by Kansas Perinatal Community Collaboratives, in partnership with the Kansas Department of Health and Environment's Bureau of Family Health.

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Executive Summary

Introduction

In Kansas, and across the United States, the primary causes for infant mortality following congenital anomalies is premature birth and low birthweight, Sudden Unexplained Infant Death (SUID), and maternal factors and complications.[1] These rates continue to be significantly affected by racial, ethnic, socioeconomic, and geographic disparities. In response, the Kansas Maternal and Child Health Council (KMCHC) supports the original recommendations by the Kansas Blue Ribbon Panel on Infant Mortality (est. 2009) to include the March of Dimes Becoming a Mom® (BaM)/Comenzando bien® (Cb) Birth Disparities program as an initiative to help address these issues. Implementation of the BaM/Cb bilingual prenatal curriculum in other states has shown an increase in adequate prenatal care and prenatal health knowledge improving health behaviors and birth outcomes (March of Dimes California Chapter, Evaluation of Becoming a Mom, Sept. 2013). To date, Kansas has found similar outcomes among program participants across our state.

Kansas' Perinatal Community Collaborative Model

In 2010, following the release of the Kansas Blue Ribbon Panel recommendations, coupled with cuts in state and local funding, the March of Dimes (MOD) Greater Kansas Chapter partnered with state and local public health partners to create an innovative concept. This concept included a perinatal community collaborative education model utilizing the Becoming a Mom®/Comenzando bien® curriculum to address birth disparities primarily among low-income, minority women who are eligible for Medicaid. Starting with a pilot program in Salina, Kansas (Saline County), the model has a two-fold focus of clinical services and prenatal education that is driven by private and public partnerships across the state and local level including: Title V Maternal & Child Health (MCH), Medicaid, local public health departments, federally qualified health centers, clinical providers, hospitals, and foundations. The community collaborative model brings permanent MCH infrastructure, leveraged and shared resources, change in the prenatal care delivery services paradigm, a vehicle to identify community needs, a standardized evaluation system, and new funding opportunities for community collective impact, and improved birth outcomes.

Statewide Expansion

This innovative model was first replicated in Junction City (Geary County), Kansas in 2012 with the similar preliminary successes of the pilot program. With two effective sites implementing the model, program evaluation tools were refined and standardized in 2013 in partnership with evaluators from the University of Kansas School of Medicine-Wichita and Wichita State University. Preliminary data reports showed improvements in participant's knowledge, behaviors, and growth of community partnerships and shared resources.

In 2014, the Kansas Department of Health and Environment (KDHE) committed to partner with the March of Dimes for further expansion of the model across the state, as well as securing long-term sustainability of the program by integrating it into Title V MCH services. This model has become known as the Kansas Perinatal Community Collaboratives (KPCC) utilizing the March of Dimes Becoming a Mom® curriculum, and has since been being replicated across the state. Three additional sites were brought on in 2014, including: Crawford County in southeast Kansas and Wyandotte County and Riley County, both in

northeast Kansas. Amerigroup (WellPoint), one of Kansas' three Medicaid (KanCare) managed care organizations, joined as a partner and investor in 2014. In January of 2015, two new sites were launched. These two sites included Reno County and Newman Regional Health Center (in Lyon County), located in central Kansas. In late 2015 (November), three additional sites launched between north and south central Kansas. These sites included: Clay County, Dickinson County, and Sedgwick County (led by KU School of Medicine in Wichita). In October 2016, the eleventh program site was launched in Montgomery County in the southeast corner of the state. This site was launched with support and partnership from a neighboring program in Crawford County. In October 2017, the twelfth program site was launched in Shawnee County, home of our state capital in northeast Kansas.

Additional expansion work in 2016 included hosting two implementation trainings in southwest Kansas in July. Work began to develop and launch the first regional BaM/Cb program model in the state. This regional approach includes 16 counties. Lead program sites are under development in the four counties with the region's largest birthing hospitals (per reported birth numbers), in partnership with outlying counties referring into the lead sites. Additional opportunity is under development for these counties to provide the program locally via virtual connection with one of the lead sites. Pilot of this virtual approach is currently underway in north central Kansas, with the already well established Saline County BaM/Cb program as the lead. Additionally, interest in the BaM/Cb program was included in the Title V SFY 2019 MCH Aid-to-Local applications for twenty-one counties located across different regions of the state. Current expansion planning involves prioritizing locations for program implementation based on birth disparities, interest by the community and will to collaborate, and lack of MCH services of this nature in the area.

Program Enhancements

Training and Support

Technical assistance, training, evaluation support, and infrastructure development has continued to be enhanced through the March of Dimes and Kansas Department of Health and Environment partnership. Through August 2015, March of Dimes led state coordination efforts including program implementation trainings and technical assistance support. In April 2015, the Kansas Department of Health and Environment increased their investment by hiring a Maternal Child Health (MCH) Consultant to support these efforts and take on the role of state coordination in-house, with the intention of expanding and building long-term sustainability of the Becoming a Mom® (BaM)/Comenzando bien® (Cb) program, while freeing March of Dimes resources for further development and expansion of the Healthy Babies are Worth the Wait initiative across the state. As there is a need for these two programs to go hand-in-hand in a community for greatest effect, we are excited about the potential of these co-existing investments.

Integration of state and local resources has been another focused enhancement to the program throughout the past couple of years and continues to be a priority. Led by the March of Dimes investment in the Saline County program as a pilot site, along with the support of KDHE staff, 2015 was spent developing and piloting an integration plan for all BaM/Cb program sites in Kansas. This plan specifically targeted the integration of state entities such as Kansas Tobacco Quitline, WIC, Kansas Breastfeeding Coalition, and the Kansas Infant Death and SIDS (KIDS) Network. This integration included redesign of the infant feeding session (session 4), including the incorporation of an evidence-based, breastfeeding-focused, curriculum. Along with this, a BaM/WIC integration plan streamlined enrollment in both

programs from the other program, while incentivizing dual participation in programs. It included the development of an "integration of tobacco cessation services toolkit", that includes standardized screening, referral, resources, and follow-up. Additionally, all sites were trained in implementing the nationally recognized, evidence-based "Baby and Me Tobacco Free" program. Following a yearlong pilot of the program in the state, six sites have decided to continue the program for another year. Updating and standardization of the safe sleep/SIDS risk reduction message as a part of the infant care session (session 5), was another focus area, as well as the development of a standardized process for screening, resources, referral, and follow-up, related to mental health. Training of all ten sites on these integration components began in November 2015 and was completed in February 2016. In July 2017 training was again provided to all program sites, providing updates on previously integrated components, as well as providing training on new integration components including oral health (in partnership with Oral Health Kansas) and a pregnancy exercise and nutrition program (PEP - in collaboration with KU School of Medicine, Wichita). Integration of services development work has continued throughout this year and will continue throughout the life of the program. KDHE is committed to continued development, training, and support, for further integration of services and resources into the BaM/Cb program model in the state of Kansas. Integration components currently on our radar for development include: Pre and Early Term Birth (focus on appropriate utilization of progesterone and low-dose aspirin); Screening, Brief Intervention, and Referral to Treatment (SBIRT) and Neonatal Abstinence Syndrome (NAS); Reproductive Life Plan including the *One Key Question* initiative. Through enhanced outreach, health education, public awareness and increased referral services available to the program's participants, we aim to continually drive the improvement of birth outcomes in our state.

Curriculum Standardization

In addition to the integration efforts outlined above, extensive work was done in late 2016 and early 2017 to enhance the original Becoming a Mom® curriculum developed and owned by MOD. This enhancement work included the addition of standardized supplemental handouts identified as needed topic content to fill gaps in education around a number of key priority areas. This work was led by KDHE, in partnership with a curriculum review committee initiated by the KU School of Medicine - Wichita (Sedgwick County program) and input from multiple local BaM/Cb programs. Support by MOD has provided guidance around this work in adherence to copyright laws protecting the original curriculum and Becoming a Mom® logo. Printing of the curriculum for all Kansas program participants in 2017 was provided thanks to partnership and financial investment from Sunflower Health Plan, another one of Kansas' three managed care organizations. Additional infrastructure support occurred throughout 2017 with the development of standardized PowerPoints, lesson and activity plans, and recommended resource documents, to be used during BaM/Cb sessions across all Kansas program sites in an effort to improve program fidelity. These materials are the product of a partnership between KU School of Medicine – Wichita (Sedgwick County) and KDHE. Additional infrastructure support continues with the ongoing buildout and enhancement of a KDHE sponsored public website for Kansas Perinatal Community Collaboratives (KPCC) and a private website for BaM/Cb implementation.

Program Evaluation

Another area of focused enhancement over the past years has been the evaluation component of the program. In the early years of program existence, there had been concern related to the value of results from program evaluation tools. It had appeared that perhaps the way some questions had been asked

was either confusing to participants, or leading. As well, there had been a number of questions where there was not a statistically significant difference between pre and post survey results. In May 2015, KDHE contracted with the University of Kansas Center for Public Partnerships and Research (KU-CPPR) to conduct analysis on the pre- and post-program survey instruments. A brief discussion of the statistical analysis methodology and results is included in the next section of this report, for a historical perspective on this process. As a result, evaluation tools were redesigned by the joint effort of KU-CPPR, KDHE, and MOD. These evaluation tools were built into the new data system "DAISEY", utilized by KDHE for data collection of Bureau of Family Health - Aid-to-Local programs, and is supported and maintained by KU-CPPR staff. DAISEY provides a single secure place for KDHE funded Family Health programs to enter all data required for state and federal reporting. DAISEY is a shared measurement system designed by social scientists to help communities see the difference they are making in the lives of at-risk children, youth, and families. It has been exciting to have the opportunity we have had to be included in the use of this new system as a part of our evaluation efforts for the BaM/Cb program. This system gives confidence in the sustainability of the program long term. BaM/Cb programs began as the first pilot sites for DAISEY, with the input of program data from new program participants as of November 1, 2015. Now well into utilization of the new evaluation tools and data system, program staff are seeing the benefit of data collection in real time via this web-based system. The "BaM/Cb Report" was developed by KDHE and KU-CPPR teams and made available to sites through the DAISEY live environment in August 2016. The report's intention is to allow BaM/Cb program staff to track and evaluate participants' enrollment, session completion, form completion, program completion, identified risk factors and referrals, in an easy-to-use and meaningful way. The KDHE and KU-CPPR teams continue to collaborate with local BaM/Cb sites to support continuous data quality improvement efforts. Ultimately, the high quality BaM/Cb data is being used in Title V MCH operations, decision making and planning, as well as by KPCC for service planning and development at the local level across partnerships.

Factor Analysis of Pre- and Post-Program Survey Instruments

To examine the properties of the surveys and the characteristics of the items, item analysis and reliability analysis were performed by the University of Kansas Center for Public Partnerships and Research (KU-CPPR). Also, in order to explore the dimensions of knowledge about pregnancy, principle component analysis (PCA) was conducted. The efficacy of the program was evaluated by comparing participants' performance on pre- and post-program surveys using repeated measures multivariate analysis of variance (MANOVA). Before performing all planned analyses, items were scored dichotomously based on participants' responses, with "1" representing a correct answer and "0" representing an incorrect answer or response of "I don't know".

Item analysis was conducted to examine the difficulty and discrimination of items. Operationally, item difficulty was defined as the proportion of participants who answered a given item correctly, and discrimination as the point-biserial correlation between participants' scores on a given item and the total scores on the survey. A negative discrimination score suggests participants who answered the item incorrectly obtained a high total score. A low discrimination score (item-total correlation less than .20) indicates participants' performance on the item did not significantly impact their overall performance on the survey. Items that met either of these criteria were removed from further analyses. After item analyses, 13 items were removed due to either negative or low discrimination scores.

The internal consistency among the remaining 26 items was examined by calculating Cronbach's α coefficient. A Cronbach's α coefficient of .834 indicated a good internal consistency of the pre-program survey scores.

Principle component analysis (PCA) was chosen over exploratory factor analysis for two reasons. First, knowledge on pregnancy was considered a domain of study rather than an unobserved theoretical construct. Therefore, the primary focuses were on information summary and item/dimension reduction. Second, after reducing a pool of items into a small number of components, the components could be used as core domains to further evaluate the efficacy of the program in improving participants' knowledge.

Kaiser-Myer-Olkin test (KMO) and Bartlett's test of sphericity were run in order to determine the appropriateness of using PCA. Items were retained based on the magnitude of their "factor loadings" and if they theoretically made sense. Items with a factor loading of 0.40 or greater were retained. Since the survey was designed to assess participants' knowledge within six domains: healthy living during pregnancy, pregnancy, labor and pain management, infant feeding, infant care, and postpartum care; in PCA, the number of components to yield was fixed to six.

The six components that emerged from pre-program survey responses were named as: Pregnancy health, Post-pregnancy health, Pre-term labor, Pre-term labor response, Normal post-partum, and Abnormal post-partum. While these were not the original hypothesized "factors", they did make sense in accordance with topics covered in the BaM program. To examine the consistency and stability of the obtained component structure, a PCA was also run on the post-program survey data. PCA failed to confirm the component structure of the survey. Therefore, the validity of the survey construct is suspect and fails to measure accurate post-intervention results.

McNemar Test

For the change in knowledge questions in Figures 18-29 and Table 2, a McNemar test was used to test the change in proportions.

Outcomes Worth Noting

In review of outcome findings noted in the next section of this report, please call attention to the improvements in outcomes over state level data and Healthy People 2020 goals, particularly related to breastfeeding initiation rates (Figure 40). We would also like to make special note of the improvement in Infant Mortality Rate (IMR) per 1,000 live births (5-year average) from pre-implementation to post-implementation in the counties of our two longest running Becoming a Mom® sites. IMR in these two counties has significantly decreased since the inception of local perinatal community collaboratives. The Saline County IMR decreased significantly from 10.1 (95% CI 7.2-13.7) in 2004-2008 to 4.3 (95% CI 2.5-7.1) in 2012-2016. The Geary County IMR decreased significantly from 11.9 (95% CI 8.6-16.0) in 2005-2009 to 5.4 (95% CI 3.6-7.7) in 2012-2016.

			Inception January 2010		
Saline County	**2004-2008**	2005-2009	2010-2014	2011-2015	**2012-2016**
IMR (5-year average) (95% CI)	**10.1 (7.2-13.7)**	9.0 (6.3-12.3)	5.5 (3.4-8.3)	4.2 (2.4-6.9)	**4.3 (2.5-7.1)**

					Inception July 2012
Geary County	2004-2008	**2005-2009**	2006-2010	2007-2011	**2012-2016**
IMR (5-year average) (95% CI)	10.5 (7.3-14.7)	**11.9 (8.6-16.0)**	10.4 (7.5-14.0)	9.9 (7.2-13.3)	**5.4 (3.6-7.7)**

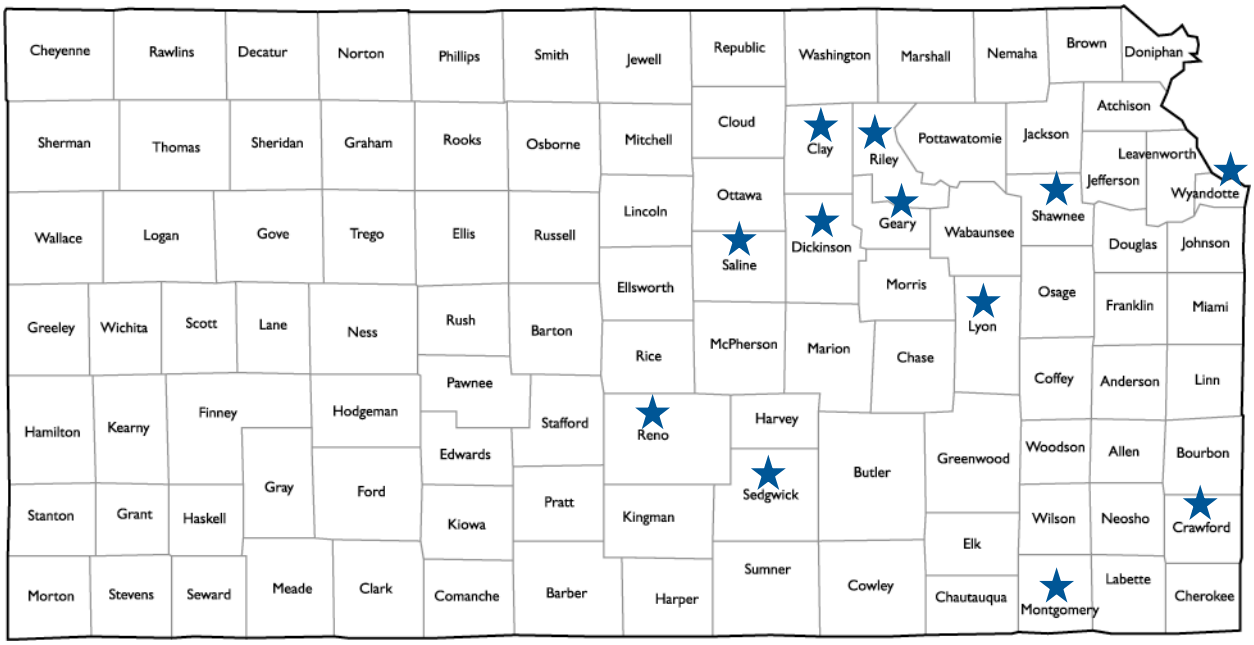
95% CI: Confidence Interval
Source: Bureau of Epidemiology and Public Health Informatics

Introduction

This report is a summary of evaluation results for January 1, 2017 through December 31, 2017 for the Becoming a Mom®/Comenzando bien® (BAM/Cb) program in Kansas. Specifically, this report summarizes findings from the pre and post surveys and follow-up health outcome questionnaires. This is the first report fully utilizing data captured in DAISEY: Initial Survey, Completion Survey, Birth Outcome Card, BaM Service From, and KDHE Program Visit Form - Adult with Profile.

This report includes the women who completed their post-survey (i.e., Completion Survey) in DAISEY between January 1, 2017 and December 31, 2017. Four datasets noted above were imported from DAISEY in Excel to SAS 9.4. They were screened, cleaned, and merged. Two data sets were created: one for women completing their post-survey between January 1, 2017 and December 31, 2017 and another for those completing their outcome survey in the same time frame. The BAM/Cb programs analyses were conducted, and data were reported for the following Kansas counties: Clay, Crawford, Dickinson, Geary, Lyon, Montgomery, Reno, Riley, Saline, Sedgwick, Shawnee, Wyandotte.

Figure 1. Location of BAM Sites



Survey Questions

Pre/Post Questions

Before the launch of DAISEY, the program utilized de-identified pre and post-survey instruments to evaluate participant responses to the educational intervention. The curriculum and questions were designed to assess knowledge of risks of pregnancy and current and future behaviors. Pregnant women indicated their response to 5 point Likert scales, yes/no, multiple choice, single choice, and fill-in-the-blank questions based on their current understanding (unassisted). The survey was comprised of thirty-seven main items with multiple sub-questions. Three (3) questions were demographic questions used to describe the population. The post-survey also included questions on the woman's experience in the program.

With the launch of DAISEY in November 2015, pre and post-survey instruments, as well as the outcome survey, were revised. In addition, demographic data fields were pulled out of the original surveys and placed on a separate program visit form in DAISEY, which collects demographic data consistently across KDHE MCH programs. The newly revised evaluation tools consist of the following questions and response types, as displayed below.

The DAISEY KDHE Program Visit Form with Profile collects the following demographic data:

Question	Type*
Primary Healthcare Coverage	SC
Secondary Healthcare Coverage	SC
Has the client had a well visit during the last 12 months?	SC
Does the client have a special health care need or disability?	Y/N
Does the client care for any children who have special health care needs or disabilities?	Y/N
Household Size	FB
Annual Household Income	FB
Education Level	SC
Current Student	SC
Employment	SC
Marital Status	SC
Date of Birth	FB
Sex	SC
Race	MC
Ethnicity	SC
Primary Language	SC
Limited English Proficiency	Y/N
*Type of Answer Choices: FB: Fill-in-Blank MC: Multiple Choice SC: Single Choice Y/N: Yes and No (and Don't Know)	

The pre-survey in DAISEY includes the following knowledge and behavior questions and response types:

Question	Type*
How did you first hear about Becoming a Mom/Comenzando bien?	SC
Is this your first pregnancy?	Y/N
If no, have you had a premature birth (gestational age of baby less than 37 weeks)?	Y/N
If yes, was the premature birth spontaneous, meaning you went into labor on your own?	Y/N

How many babies have you had weighing less than 5 lbs. 8 oz.?	FB
How many miscarriages have you had?	FB
Have you had a baby that was not born alive?	Y/N
Have you had a baby that died within the 1st year?	Y/N
Do you have any other children living in the home?	Y/N
If yes, Indicate the number of children in the home less than 1 yr old	FB
If yes, Indicate the number of children in the home age 1 to 11 yrs old	FB
If yes, Indicate the number of children in the home age 12 to 22 yrs old	FB
Number of these children who have Special Health Care Needs:	FB
How pregnant are you now?	SC
When is your due date?	FB
Have you had your first prenatal appointment?	Y/N
If no, is your appointment scheduled?	Y/N
If no, what is the reason for no prenatal appointment?	SC
What trimester did you begin seeing a health care provider for this pregnancy?	SC
What is the name of your healthcare provider/clinic?	FB
Do you have any of the following health problems?	MC
If you have a health problem not listed, please explain:	FB
Has your healthcare provider told you that you have a "high risk" pregnancy?	Y/N
If yes, please indicate the reason(s).	FB
Are you enrolled in the WIC Program?	Y/N
I attend scheduled prenatal care visits with my healthcare provider (Doctor or Nurse Midwife):	SC
The following sometimes prevents me from attending my prenatal appointments:	MC
Please specify "other" barrier(s) to attending prenatal appointments:	FB
I currently take prenatal or multi-vitamins containing folic acid:	SC
Which of the following are signs of preterm labor/labor?	MC
I should do the following if I'm experiencing preterm labor (before 37 weeks):	MC
The following postpartum symptoms are normal for a mother to experience after delivery:	MC
If I experience depression and/or anxiety during or after my pregnancy, I am ___ about available resources in my community.	SC
If I experience depression and/or anxiety during or after my pregnancy, I am ___ to talk with my healthcare provider and/or access available resources:	SC
I have talked to my healthcare provider about medications that I'm taking (prescription and/or over the counter, herbal, etc.):	SC
If I am considering taking medications (prescription and/or over the counter, herbal, etc.), I am _____to talk to my healthcare provider before taking them.	SC
I walk or do at least 30 minutes of moderate, low-impact physical activity _____ days per week.	SC
I currently smoke _____ cigarettes per day.	SC
I believe I can use alcohol _____ without harming my baby.	SC
I believe I can use narcotics _____ without harming my baby.	SC
I believe I can use Marijuana _____ without harming my baby.	SC
I believe I can use methamphetamines or amphetamines _____ without harming my baby.	SC
I am _____ to develop a birth plan and talk to my healthcare provider about it.	SC
A pregnancy is full-term when it reaches _____ weeks.	SC
The following are benefits of a full term pregnancy:	MC
The following is true about breastfeeding: (check all that apply)	MC
I am _____ to breastfeed my baby.	SC
If I am having difficulty breastfeeding my baby or if I have questions about breastfeeding, I know about _____ available resources in my community.	SC
I feel _____ about my ability to breastfeed.	SC
After delivery, I plan to take prenatal vitamins or multi-vitamins containing folic acid:	SC
I will put my baby to sleep on his/her:	MC
At home, my baby will sleep:	MC

I am ___ to talk about Safe Sleep with my child's other care providers (family members, childcare providers, etc).	SC
I am _____ to talk to my healthcare provider during my prenatal care about methods for preventing pregnancy after the birth of my baby.	SC
What method are you planning to use/talk to your healthcare provider about?	MC
I believe there is _____ to my health and the health of my next baby if I wait a minimum of 18 months before my next pregnancy.	SC
*Type of Answer Choices: FB: Fill-in-Blank MC: Multiple Choice SC: Single Choice Y/N: Yes and No (and Don't Know)	

The post-survey in DAISEY includes the same knowledge and behavior questions plus the following evaluation fields:

Question	Type*
Please indicate whether you have contacted or plan to contact the following community resources: • Heathy Start • Childcare Services • Substance Abuse Treatment Services • Medicaid/KanCare • Tobacco Cessation • Domestic Violence Prevention Services • Mental Health Services • Kansas Infant Death and SIDS Network • WIC Services • Breastfeeding Support Services • Car Seat Installation • Parenting/Early Childhood Services • Transportation • Housing • Other Pregnancy Resources (i.e. Text-4-Baby, other local pregnancy services or childbirth classes, etc.) • Other (i.e. local food program, cloth diapering resources, etc.)	SC
How was your overall experience with the Becoming a Mom/Comenzando bien program?	SC
I felt a connection to and supported by other pregnant women in the classes.	Likert
I felt a connection to and supported by my class teacher or group leader.	Likert
How hard was the information in the Becoming a Mom/Comenzando bien session to understand?	SC
How much new information did you learn from the Becoming a Mom/Comenzando bien program?	SC
The Becoming a Mom/Comenzando bien teacher/instructor:	MC
How helpful/valuable was Session 1, the Prenatal Care session (common discomforts, prenatal care, conditions/complications, preterm labor, etc.)?	SC
How helpful/valuable was Session 2, the Pregnancy Health session (medications, avoiding alcohol, smoking, weight gain, healthy diet and exercise, effects of: stress, certain foods, infections, environmental exposures, etc.)?	SC
How helpful/valuable was Session 3, the Labor and Delivery session (preterm labor, labor and birth, coping mechanisms, birth plan, etc.)?	SC
How helpful/valuable was Session 4, the Infant Feeding session (breastfeeding, bottle feeding, hunger cues, etc.)?	SC
How helpful/valuable was Session 5, the Infant Care session (Period of Purple Crying, infant calming techniques, safe swaddling, SIDS Risk Reduction/Safe Sleep, infant car seat installation and other infant safety topics)?	SC

How helpful/valuable was Session 6, the Postpartum Care session (physical changes, emotional changes, keeping healthy after baby, birth spacing, family planning options, etc.)?	SC
Please provide below any additional feedback you may have regarding the Becoming a Mom/Comenzando bien program:	Narrative
*Type of Answer Choices: FB: Fill-in-Blank Likert: 5-point Likert Scale from Strongly Disagree to Strongly Agree MC: Multiple Choice SC: Single Choice Y/N: Yes and No (and Don't Know)	

Outcome Questions

The program utilized different methods at each program site to gather birth outcome data. Most data was self-reported by participants and some was extracted from accessible medical records by those involved in usual maternity care/services and reported to the program (as described in participant consent form). The questions in DAISEY include the following:

Question	Type*
What is the name of the hospital where you gave birth?	FB
At what gestational age was your baby born?	SC
What was your baby's weight at birth?	SC
Were you induced?	Y/N
If you were induced, what was the reason?	SC
If "other", please explain:	Narrative
How was your baby delivered?	SC
If by Cesarean delivery, what was the reason?	SC
If "other", please explain:	Narrative
Did you develop any medical conditions during your pregnancy?	Y/N
If yes, please indicate the medical conditions you developed:	MC
Other medical condition:	Narrative
Are you currently breastfeeding your baby?	Y/N
If no, did you nurse at all?	Y/N
If yes, how long did you nurse?	SC
Are you using:	SC
Did any information that you learned in class change your mind about:	MC
How old is your baby?	FB
Have you had/scheduled your first postpartum check-up?	SC
Where are you going/planning to go for postpartum care?	MC
WIC Services:	SC
Are you enrolled in the WIC Program?	Y/N
Please indicate whether you have or plan to contact the following community resources: • Healthy Start • Childcare Services • Substance Abuse Services • Medicaid/KanCare • Tobacco Cessation • Domestic Violence Prevention Services • Mental Health Services • Breastfeeding Support Services • Car Seat Installation • Parenting/Early Childhood Services • Transportation	SC

• Housing • Other Pregnancy Resources (i.e. Text-4-Baby, other local pregnancy services or childbirth classes, etc.) • If "other pregnancy resources", please specify: • Other (i.e. local food program/resources other than WIC, cloth diapering resources, etc.) • If "other", community resource, please specify:	
Have you scheduled or attended your baby's first check up?	Y/N
Do you have a doctor for your baby?	Y/N
What type of insurance do you have for your child?	SC
At birth, did your baby have any medical conditions/ concerns which required NICU admission?	Y/N
If yes, please indicate the conditions/concerns:	MC
Are you taking multivitamins/prenatal vitamins?	SC
I currently smoke ___cigarettes per day.	SC
Have you talked to your doctor about options for preventing pregnancy?	Y/N
Are you using or do you plan to use any method to prevent pregnancy?	Y/N
What method are you using/planning to use?	MC
*Type of Answer Choices: FB: Fill-in-Blank MC: Multiple Choice SC: Single Choice Y/N: Yes and No (and Don't Know)	

Results/Analysis

Data presented throughout the report represent participants with a post-survey completed between January 1, 2017 and December 31, 2017 (N=803) (Table 1). The data in the outcome section represents participants with a completed outcome survey in the same time frame (N=647).

Demographics

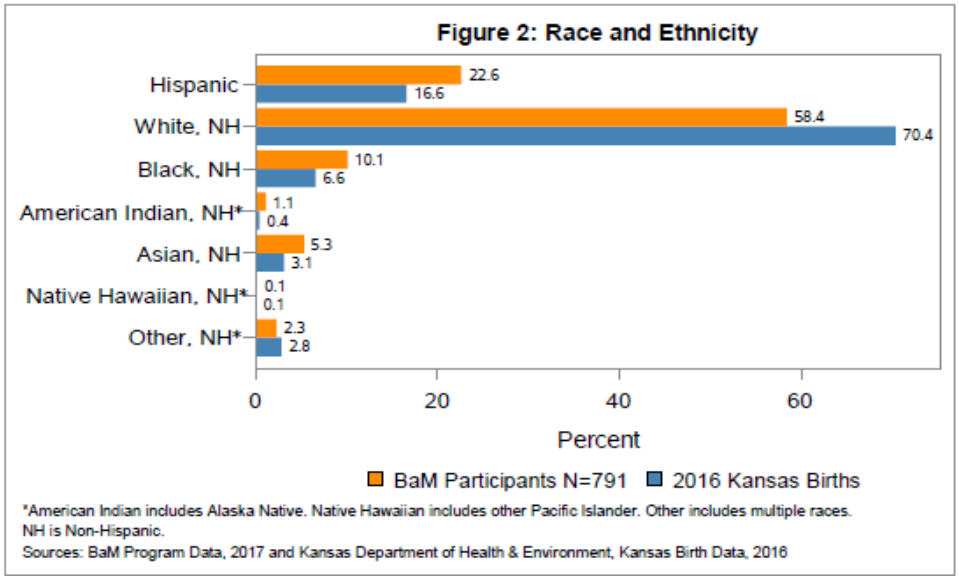
Sedgwick County had the greatest number of participant post-surveys (n=213), followed by Lyon County (n=107) and Geary County (n=100). Six hundred and forty-seven mothers completed the outcome survey. Births of multiples included a set of twins in Crawford County, a set of twins in Geary County, a set of twins in Lyon County, a set of twins in Riley County, a set of twins in Saline County, and two sets of twins in Sedgwick County totaling 654 babies.

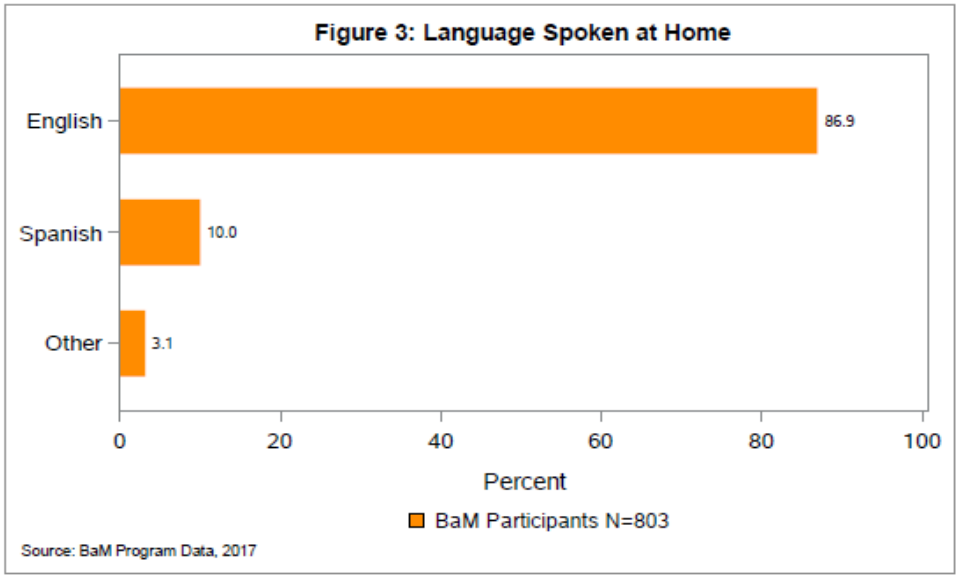
Table 1: Number of Participants by Site

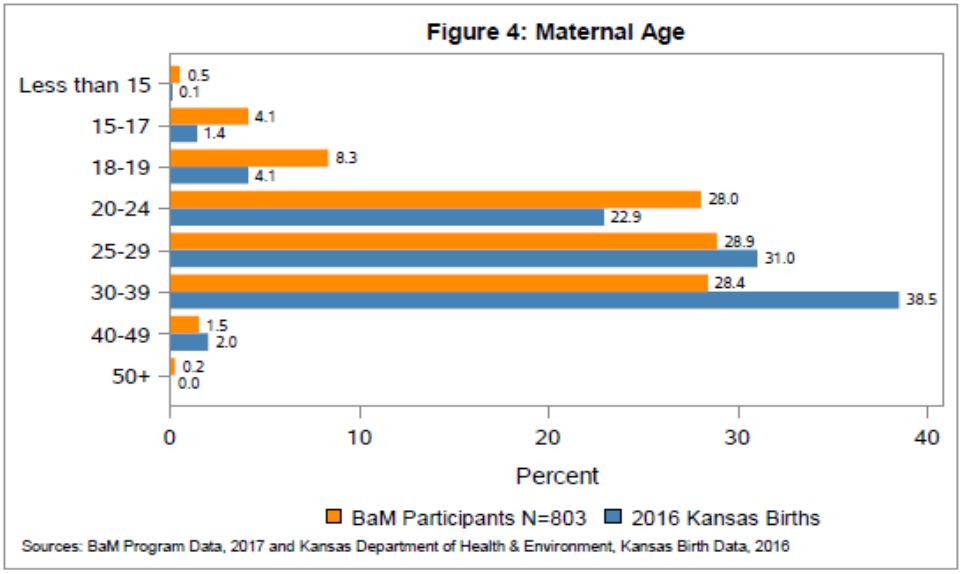
Site Name	Pre-Survey	Post-Survey*	Outcome**
Clay County	7	9	10
Crawford County	39	25	25
Dickinson County	17	16	10
Geary County	130	100	55
Lyon County	142	107	93
Montgomery County	27	23	26
Reno County	138	88†	61
Riley County	127	85†	81
Saline County	135	84	64
Sedgwick County	279	213	156
Shawnee County	10	8	2
Wyandotte County	127	46	64

Total	1178	803	647
*The data represent participants who completed the respective form in 2017. **Note: This number reflects the number of mothers who completed the outcome survey (therefore does not reflect each baby in a birth of multiples). †Transferred (counted only once in this report).			

The predominant racial/ethnic group was non-Hispanic white (58.4%), followed by Hispanic (22.6%), non-Hispanic black (10.1%) and non-Hispanic others (8.9%) (Figure 2). The majority of participants (86.9%) reported speaking English at home (Figure 3), which is a lower percentage than the state in general which reports 95.2% primarily speaking English.[1] Age of participants ranged from less than 15 years to over 50 years, with the majority of participants being in their 20s and 30s (Figure 4). Overall, the *Becoming a Mom*® */Comenzando bien*® (BaM/Cb) participant demographics suggests the program is reaching a more diverse population than is representative of the population of the state at large (based on 2016 births), which is an aim of the program.







Descriptive Characteristics

Employment status varied among participants, with the highest percentage being unemployed (Figure 5). A third (34.3%) of the participants reported having a college degree, while 42.5% of the participants reported having only a high school degree or less (Figure 6). The BaM/Cb programs appear to be doing a great job reaching the higher risk population that has a lower education level (higher percentage than all Kansas births in 2016). More than half (53.2%) of the participants were enrolled in Women, Infants, and Children (WIC) (Figure 7), which is higher than the overall percentage of enrollment among 2016 births (31.5%), indicating integration efforts between the two programs have been successful. Forty-one percent of the participants were insured by KanCare/Medicaid (higher percentage than all Kansas births in 2016), 35.1% were insured by private insurance (lower percentage than all Kansas births in 2016) and 12.2% did not have insurance (higher percentage than all Kansas births in 2016) (Figure 8). Again, this data supports the program's aim to reach the uninsured/underinsured population that is at greater risk of poor health and birth outcomes. Nearly two-thirds (59.5%) of the BaM/Cb participants were experiencing their first pregnancy (Figure 9). The majority (89.0%) of participants initiated prenatal care in the first trimester (Figure 10), a higher percentage than that of all Kansas births in 2016 (80.8%). About 1 in 20 (5.4%) participants reported being a smoker in the pre-survey (Figure 11). One in 8 (13.2 %) participants were told they have a high-risk pregnancy (Figure 12). While two-thirds of participants (63.7%) reported not having a health problem, the two most common health conditions were asthma (12.5%) and depression/anxiety (15.2%) (Figure 13). Nearly half (42.9%) of participants heard about BaM/Cb through a clinic, indicating the collaborative nature of program implementation between public health and clinical providers is working. More than half (55.4%) of participants started the program in their second trimester, which is a targeted entry point for the program (Figure 15). Out of 474 participants with an Edinburgh score recorded, 20.5% required a referral based on their Edinburgh score of 10 or greater (Figure 16), further supporting the need for integrated screening and referral systems as established in the Kansas community collaborative program model through the "Mental Health Integration Toolkit". The majority (87.5%) of participants reported not having anything keeping them from their prenatal appointments (Figure 17).

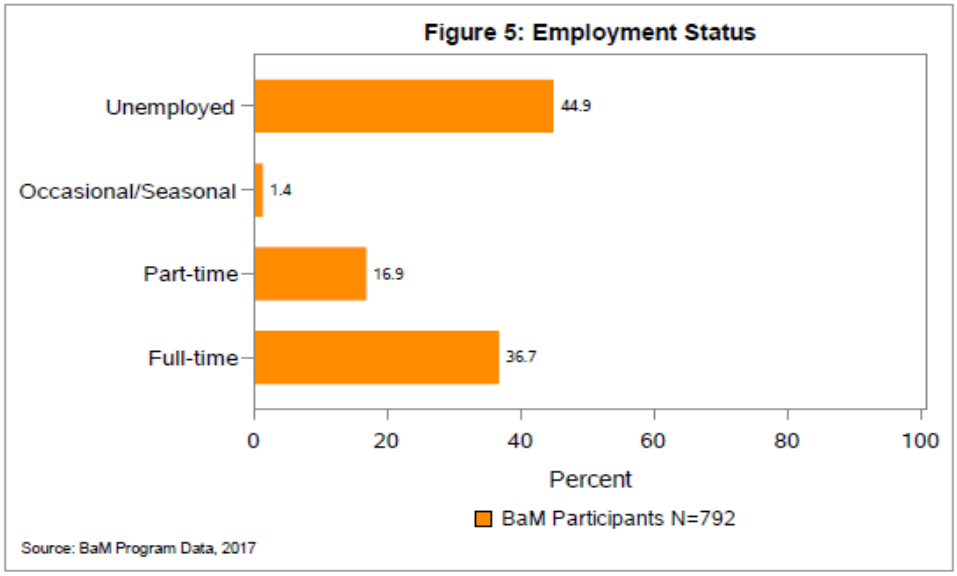


Figure 5: Employment Status
Unemployed
Occasional/Seasonal
Part-time
Full-time
44.9
1.4
16.9
36.7
0
20
40
60
80
100
Percent
BaM Participants N=792
Source: BaM Program Data, 2017

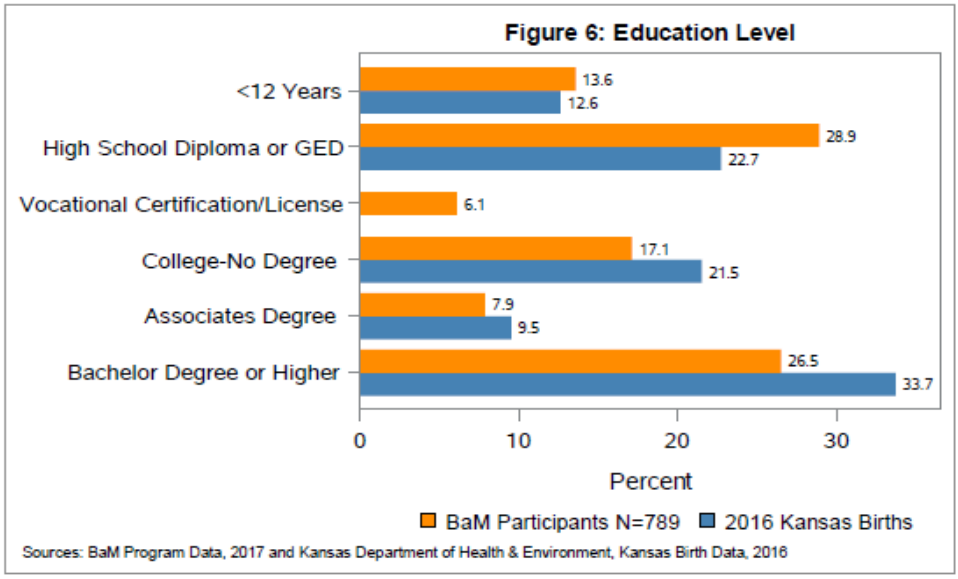


Figure 6: Education Level
<12 Years
High School Diploma or GED
Vocational Certification/License
College-No Degree
Associates Degree
Bachelor Degree or Higher
13.6
12.6
28.9
22.7
6.1
17.1
21.5
7.9
9.5
26.5
33.7
0
10
20
30
Percent
BaM Participants N=789
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

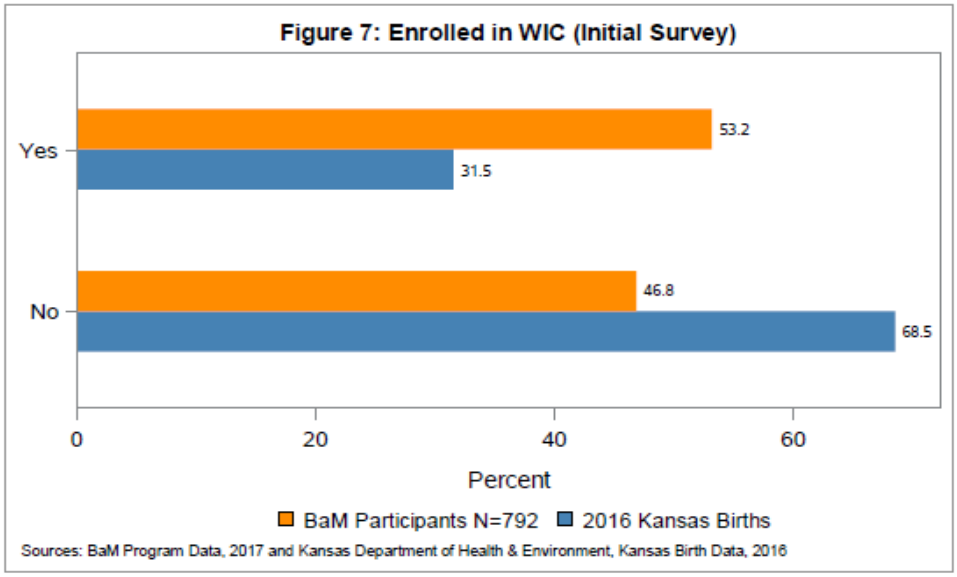


Figure 7: Enrolled in WIC (Initial Survey)
Yes
No
53.2
31.5
46.8
68.5
0
20
40
60
Percent
BaM Participants N=792
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

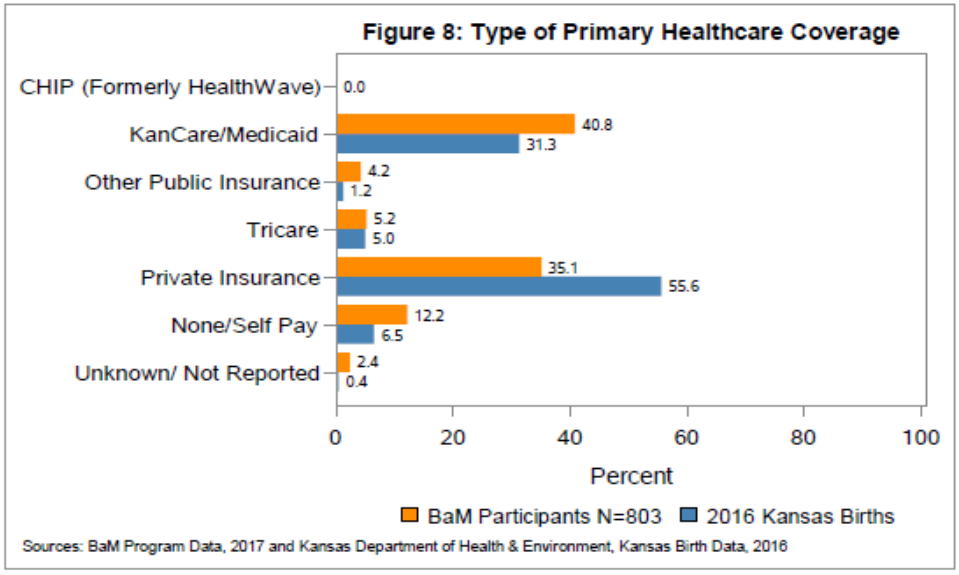


Figure 8: Type of Primary Healthcare Coverage
CHIP (Formerly HealthWave)
KanCare/Medicaid
Other Public Insurance
Tricare
Private Insurance
None/Self Pay
Unknown/ Not Reported
0.0
40.8
31.3
4.2
1.2
5.2
5.0
35.1
55.6
12.2
6.5
2.4
0.4
0
20
40
60
80
100
Percent
BaM Participants N=803
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

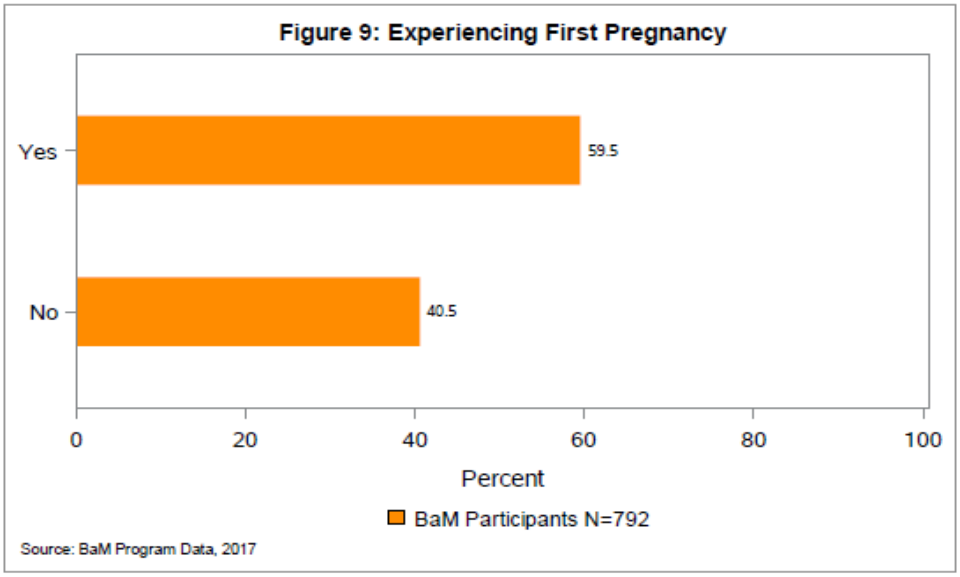


Figure 9: Experiencing First Pregnancy
Yes
No
59.5
40.5
0
20
40
60
80
100
Percent
BaM Participants N=792
Source: BaM Program Data, 2017

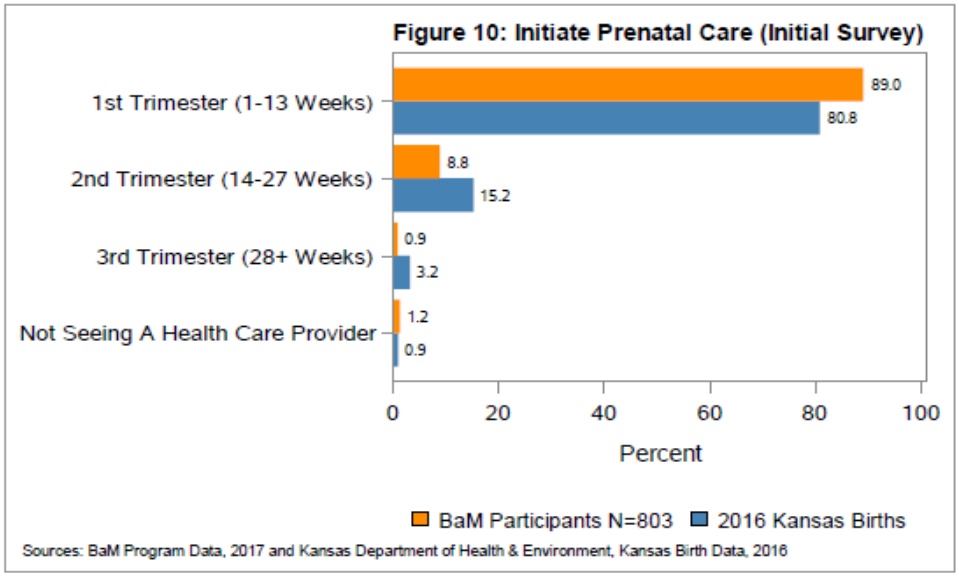


Figure 10: Initiate Prenatal Care (Initial Survey)
1st Trimester (1-13 Weeks)
2nd Trimester (14-27 Weeks)
3rd Trimester (28+ Weeks)
Not Seeing A Health Care Provider
89.0
80.8
8.8
15.2
0.9
3.2
1.2
0.9
0
20
40
60
80
100
Percent
BaM Participants N=803
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

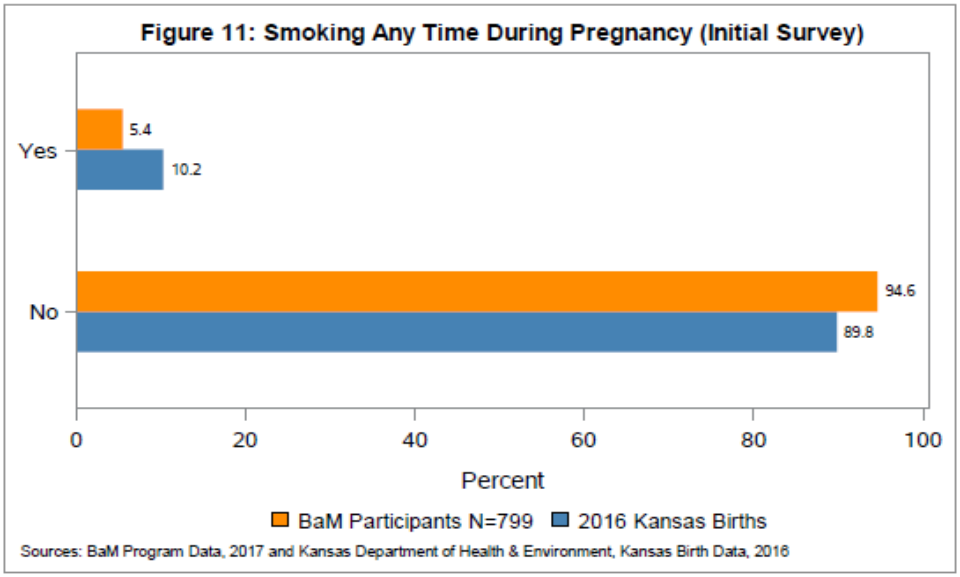


Figure 11: Smoking Any Time During Pregnancy (Initial Survey)
Yes
No
5.4
10.2
94.6
89.8
0
20
40
60
80
100
Percent
BaM Participants N=799
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

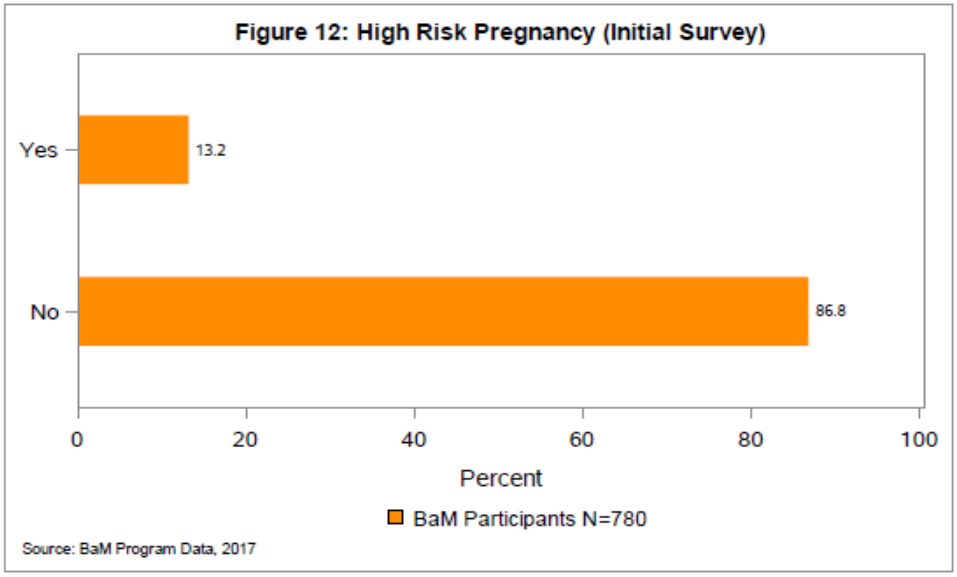


Figure 12: High Risk Pregnancy (Initial Survey)
Yes
No
13.2
86.8
0
20
40
60
80
100
Percent
BaM Participants N=780
Source: BaM Program Data, 2017

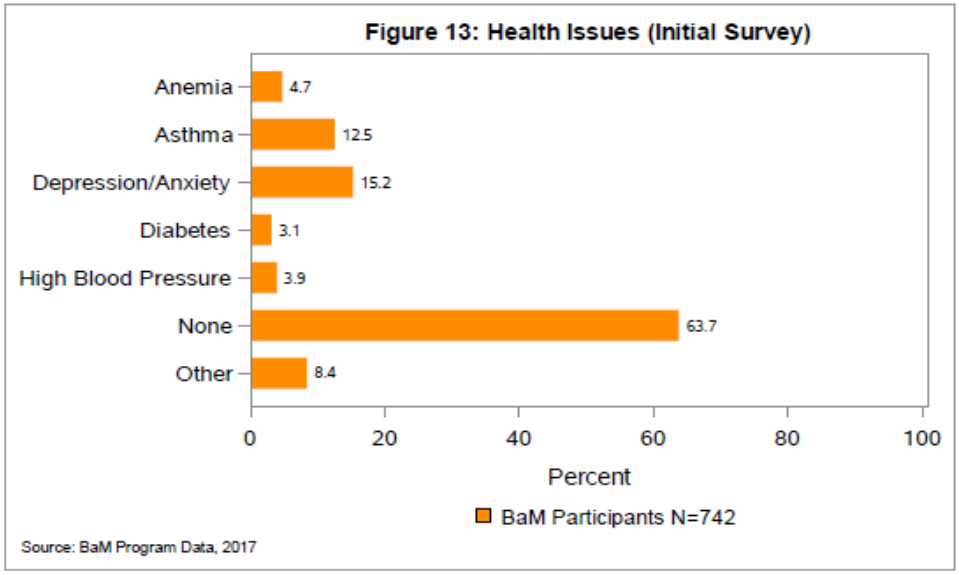


Figure 13: Health Issues (Initial Survey)
Anemia
Asthma
Depression/Anxiety
Diabetes
High Blood Pressure
None
Other
4.7
12.5
15.2
3.1
3.9
63.7
8.4
0
20
40
60
80
100
Percent
BaM Participants N=742
Source: BaM Program Data, 2017

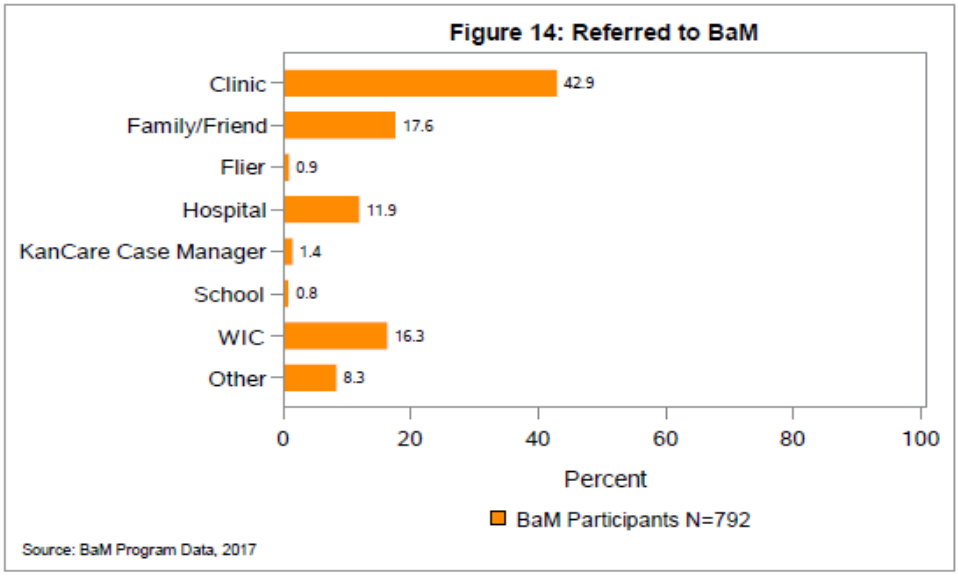


Figure 14: Referred to BaM
Clinic
Family/Friend
Flier
Hospital
KanCare Case Manager
School
WIC
Other
42.9
17.6
0.9
11.9
1.4
0.8
16.3
8.3
0
20
40
60
80
100
Percent
BaM Participants N=792
Source: BaM Program Data, 2017

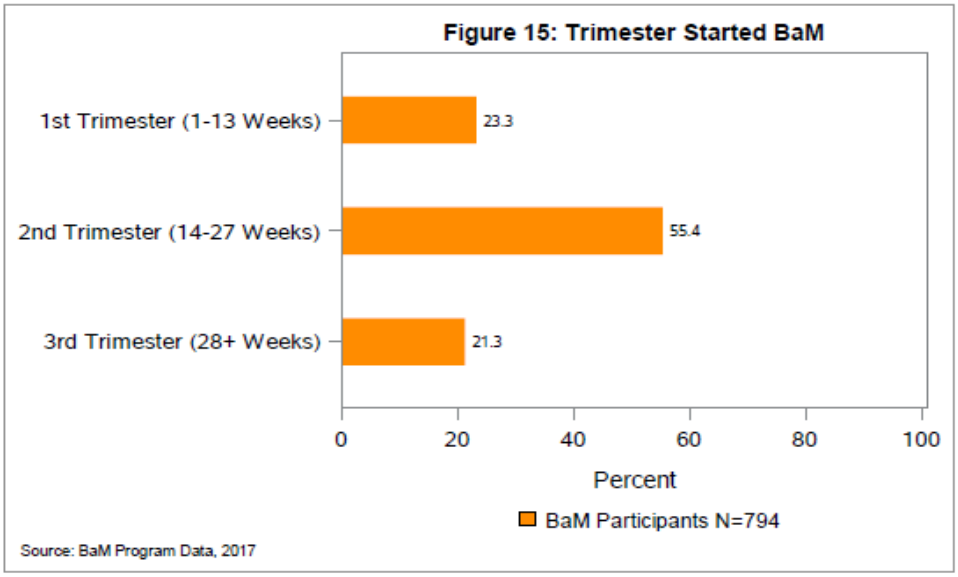


Figure 15: Trimester Started BaM
1st Trimester (1-13 Weeks)
2nd Trimester (14-27 Weeks)
3rd Trimester (28+ Weeks)
23.3
55.4
21.3
0
20
40
60
80
100
Percent
BaM Participants N=794
Source: BaM Program Data, 2017

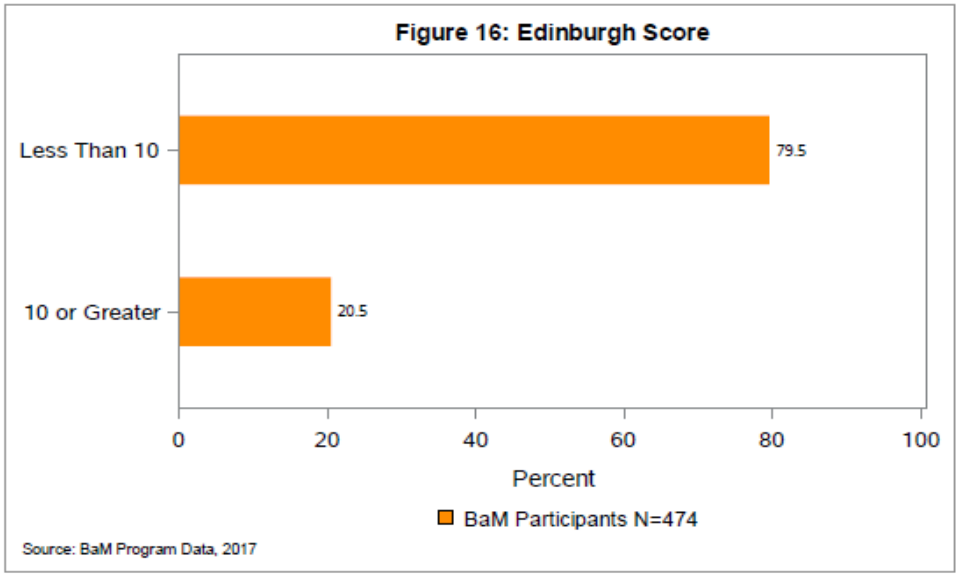
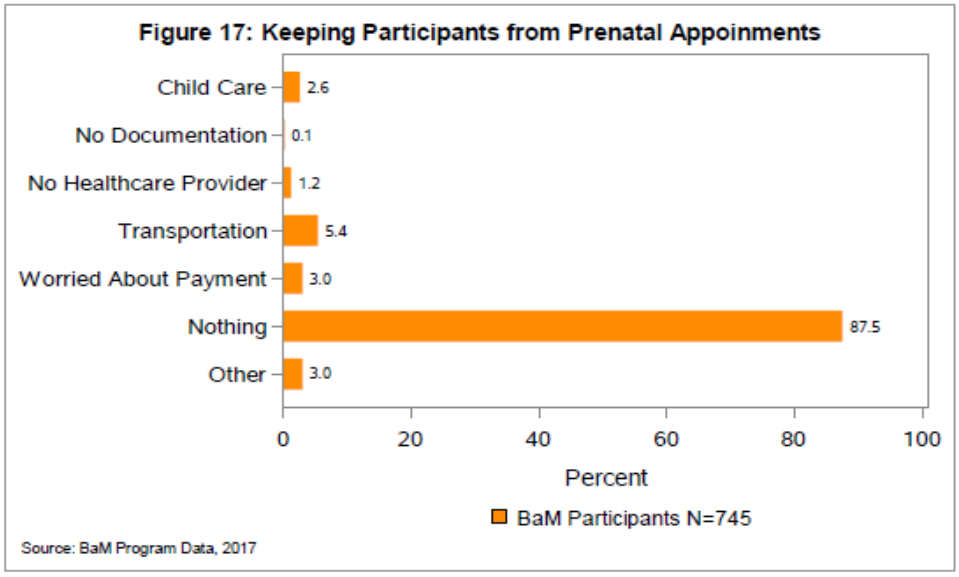


Figure 16: Edinburgh Score
Less Than 10
10 or Greater
79.5
20.5
0
20
40
60
80
100
Percent
BaM Participants N=474
Source: BaM Program Data, 2017



Change in Knowledge/Behavior

Figures 18-29 display questions assessing change in knowledge and behavior that were added to the evaluation tools upon revision and the launch of DAISEY.

Post-intervention, participants report they were more likely to talk to a healthcare provider or access available resources if she experienced depression and/or anxiety during or after pregnancy (Figure 18). Participants also reported being more knowledgeable about available resources in the community related to depression and/or anxiety (Figure 19). This data supports the benefit of the integrated mental health component, which focuses on education, screening, and referral. The majority of participants were already likely to discuss medications with a healthcare provider before taking them (Figure 20). Furthermore, the majority of participants already knew alcohol, marijuana, methamphetamine and narcotics should never be taken during pregnancy (Figure 21). There was improvement in the number of cigarettes smoked per day from pre to post survey, however it was minimal. About 9 in 10 participants were non-smokers during their time in BaM/Cb. Most of the women who did smoke, reported smoking less than half a pack of cigarettes a day (Figure 22).

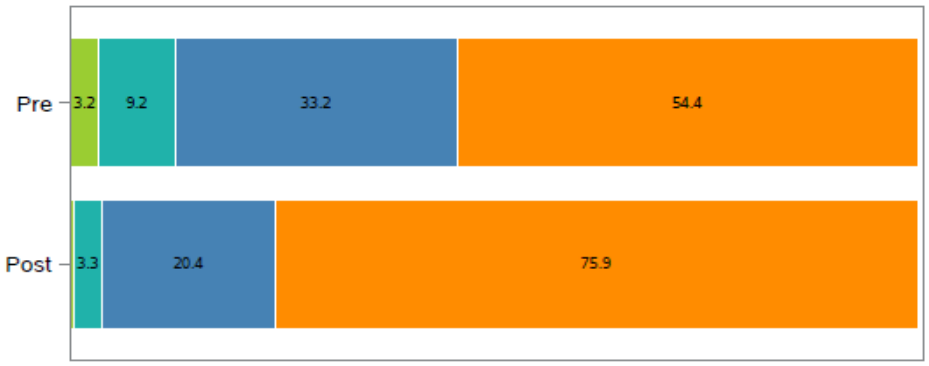
There was a 10.2% increase (from 83.5% to 75.8%) in the number of women who reported being very likely to breastfeed, post-intervention (Figure 23). Additionally, following program completion, participants had gained confidence in their ability to breastfeed (Figure 24) and were more knowledgeable about resources available to help with breastfeeding (Figure 25). This data strongly supports the great benefit of the breastfeeding education and support component that has been integrated into the BaM/Cb program, as data provided by the Healthy Children Project, Inc. suggests breastfeeding discontinuation at 2 weeks is associated with lack of confidence on day one or two postpartum.

There was an increase in participants' likelihood of discussing a plan for pregnancy prevention with their provider during their prenatal care (Figure 26). Post-program, more participants believe there is great benefit to waiting a minimum of 18 months between pregnancies (Figure 27).

There was a slight improvement in participants' intake of a prenatal or multivitamin containing folic acid in the "Never", "1-3 times per week", and "4-6 times per week" categories. However, a slight decrease in

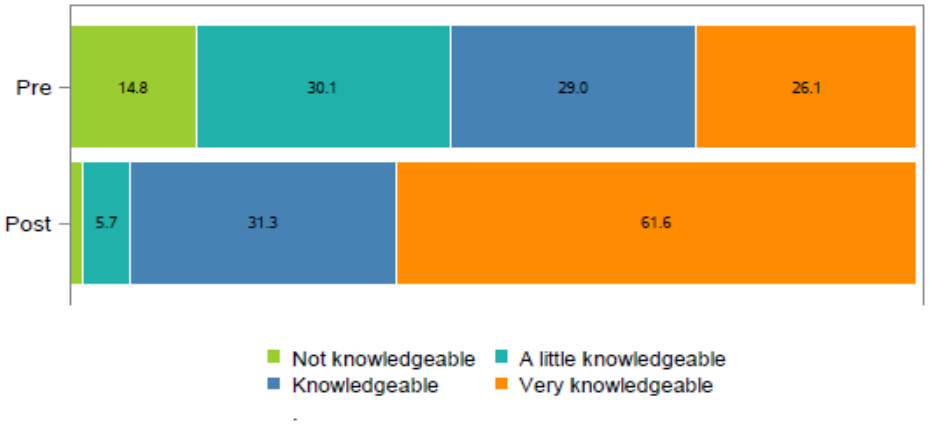
taking a daily prenatal or multivitamin containing folic acid was observed (Figure 28). Participants showed a slight overall increase in the number of days per week they do 30 minutes of low-impact to moderate exercise (Figure 29).

Figure 18: If I experience depression and/or anxiety during or after my pregnancy, I am ___to talk with my healthcare provider and/or access available resources



BaM Participants N=785
Source: BaM Program Data, 2017

Figure 19: If I experience depression and/or anxiety during or after my pregnancy, I am ___about available resources in my community



BaM Participants N=783
Source: BaM Program Data, 2017

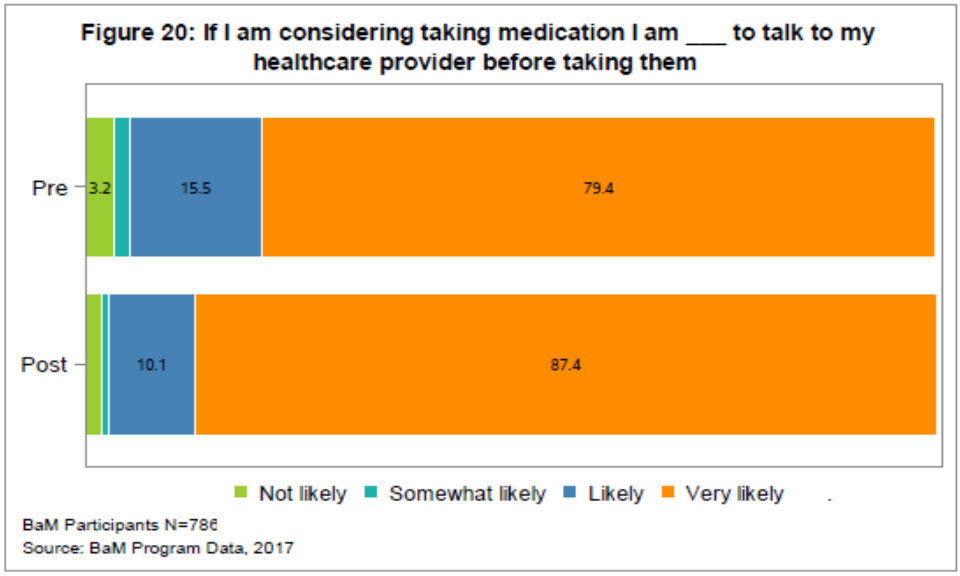


Figure 20: If I am considering taking medication I am ___ to talk to my healthcare provider before taking them
Pre
Post
3.2
15.5
79.4
10.1
87.4
Not likely
Somewhat likely
Likely
Very likely
BaM Participants N=786
Source: BaM Program Data, 2017

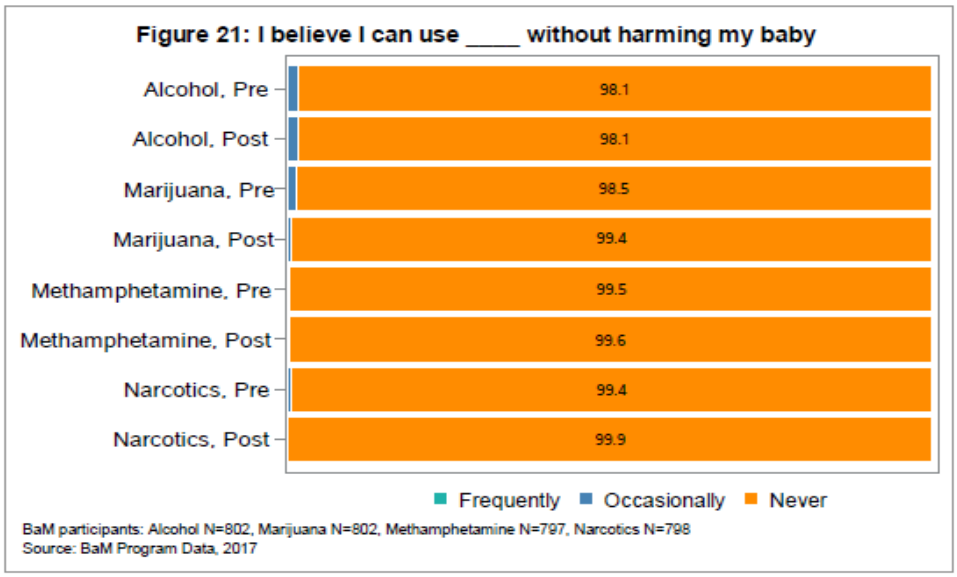


Figure 21: I believe I can use ____ without harming my baby
Alcohol, Pre
Alcohol, Post
Marijuana, Pre
Marijuana, Post
Methamphetamine, Pre
Methamphetamine, Post
Narcotics, Pre
Narcotics, Post
98.1
98.1
98.5
99.4
99.5
99.6
99.4
99.9
Frequently
Occasionally
Never
BaM participants: Alcohol N=802, Marijuana N=802, Methamphetamine N=797, Narcotics N=798
Source: BaM Program Data, 2017

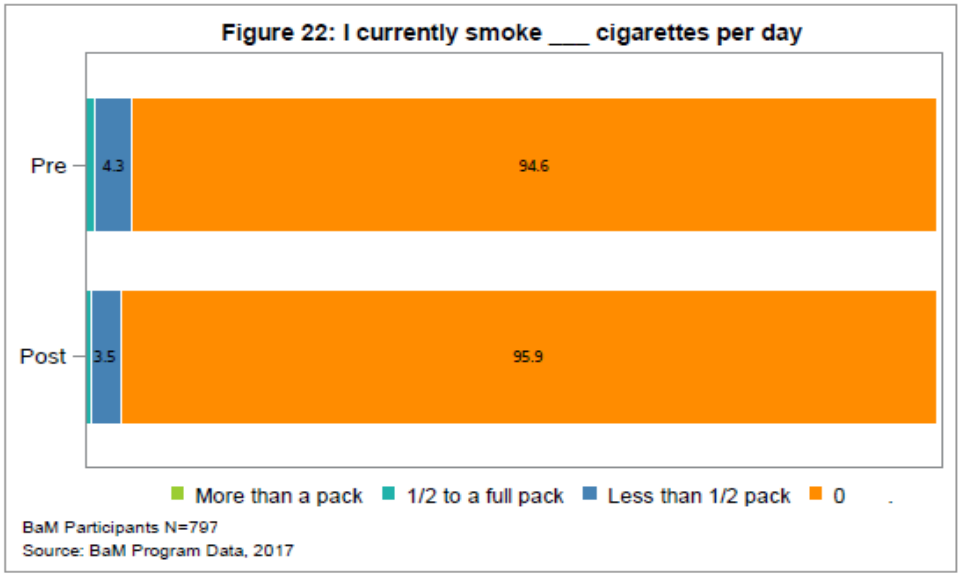


Figure 22: I currently smoke ___ cigarettes per day
Pre
Post
4.3
94.6
3.5
95.9
More than a pack
1/2 to a full pack
Less than 1/2 pack
0
BaM Participants N=797
Source: BaM Program Data, 2017

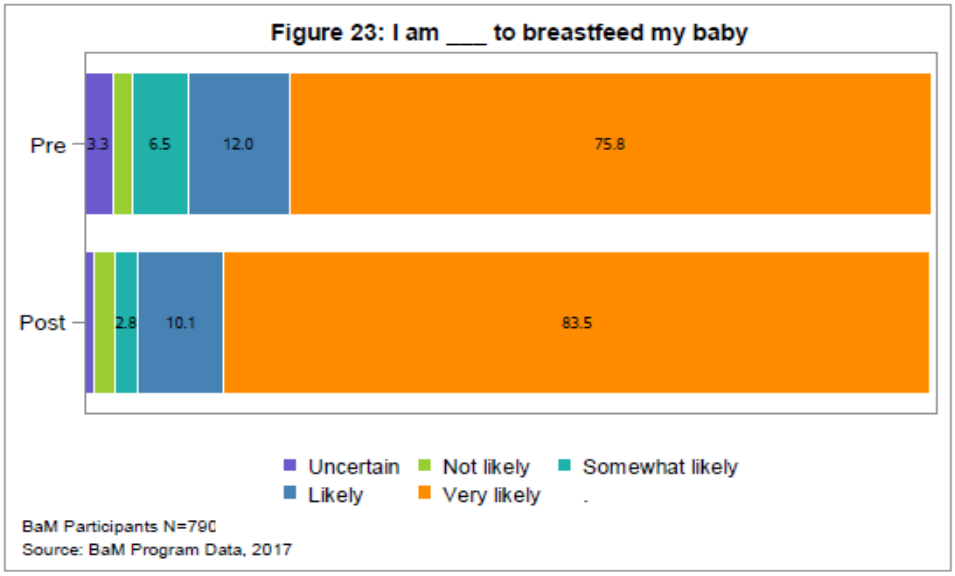


Figure 23: I am ___ to breastfeed my baby
Pre
Post
3.3
6.5
12.0
75.8
2.8
10.1
83.5
Uncertain
Not likely
Somewhat likely
Likely
Very likely
BaM Participants N=790
Source: BaM Program Data, 2017

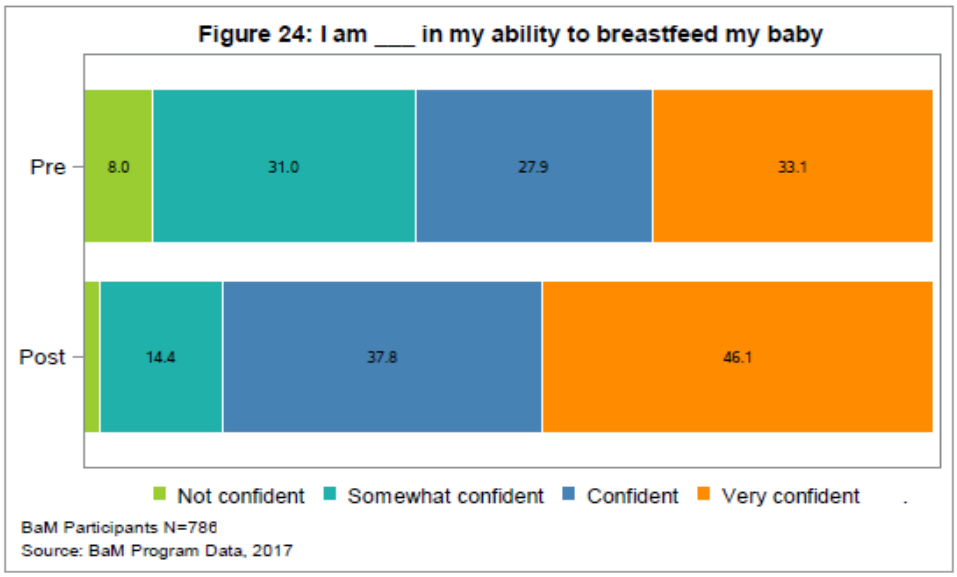


Figure 24: I am ___ in my ability to breastfeed my baby
Pre
Post
8.0
31.0
27.9
33.1
14.4
37.8
46.1
Not confident
Somewhat confident
Confident
Very confident
BaM Participants N=786
Source: BaM Program Data, 2017

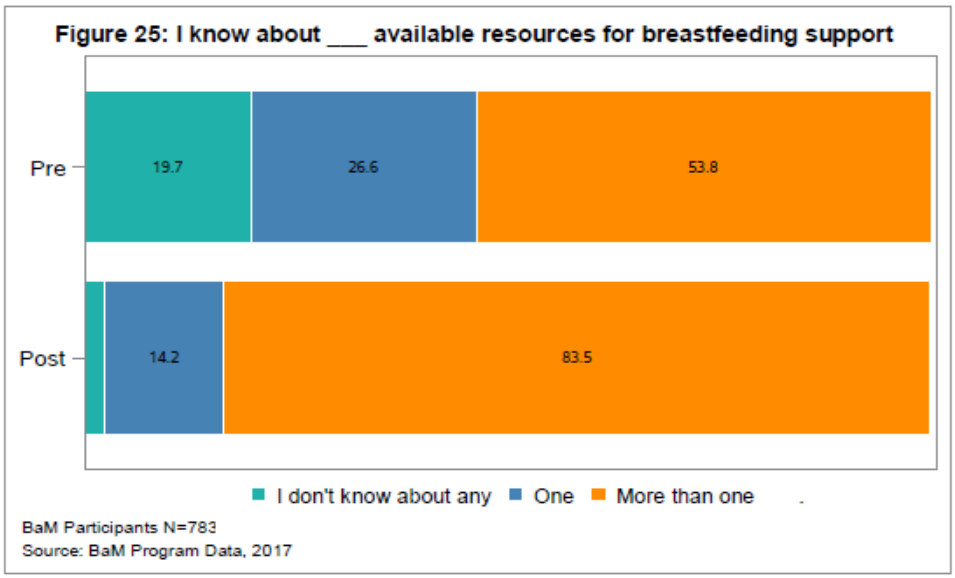
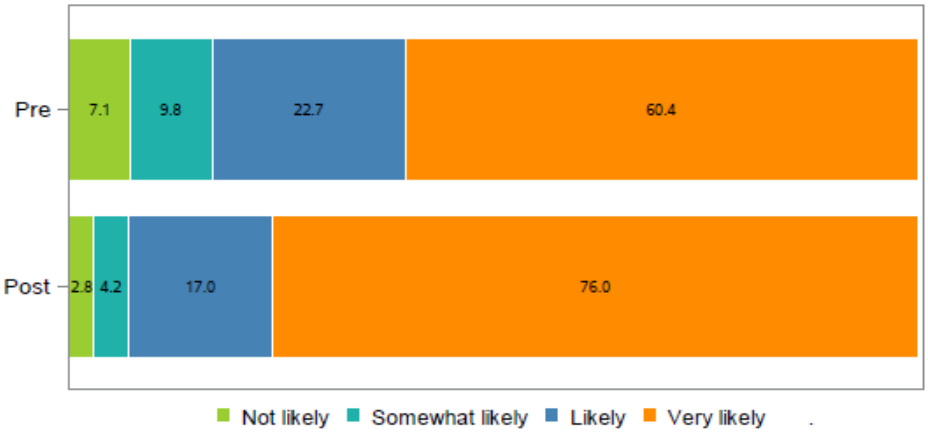


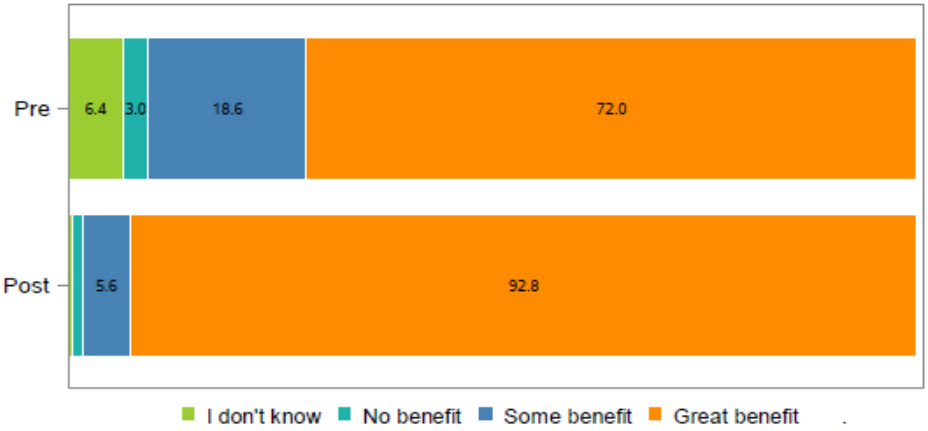
Figure 25: I know about ___ available resources for breastfeeding support
Pre
Post
19.7
26.6
53.8
14.2
83.5
I don't know about any
One
More than one
BaM Participants N=783
Source: BaM Program Data, 2017

Figure 26: I am ___ to talk to my healthcare provider during my prenatal care about methods for preventing pregnancy after the birth of my baby



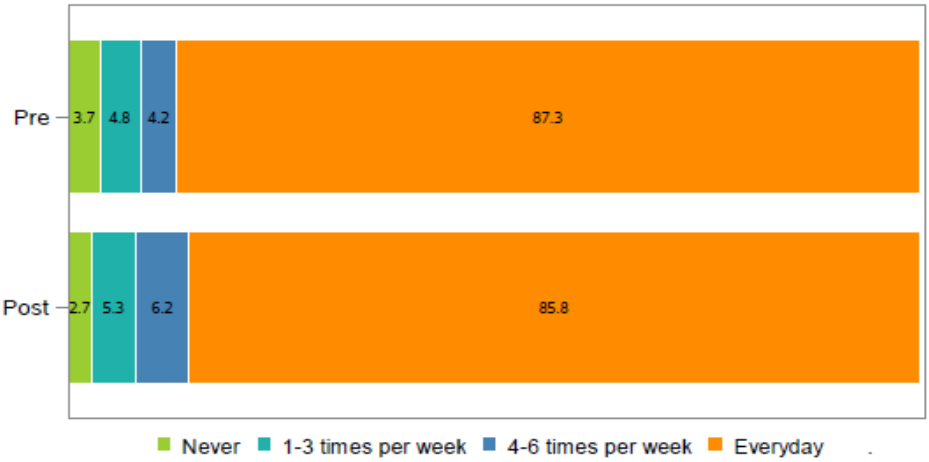
BaM Participants N=792
Source: BaM Program Data, 2017

Figure 27: I believe there is ___ benefit for waiting 18-24 months between pregnancies

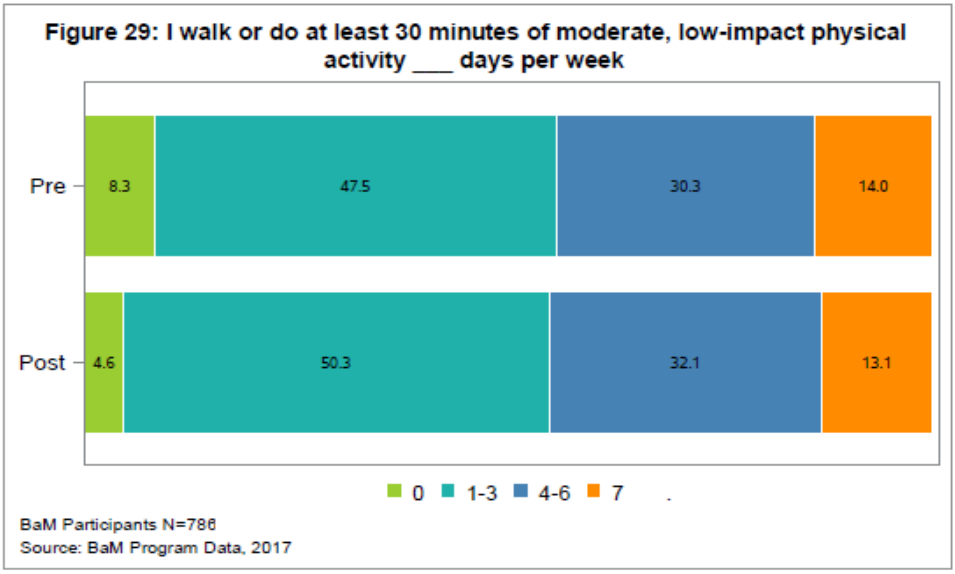


BaM Participants N=769
Source: BaM Program Data, 2017

Figure 28: I currently take prenatal or multi-vitamins containing folic acid:



BaM Participants N=788
Source: BaM Program Data, 2017



All six questions related to preterm labor signs had significant improvements from pre to post surveys (Table 2). Two questions related to what a woman should do if she is experiencing preterm labor symptoms showed significant improvement, while work still needs to be done to clarify messaging around the other two.

Questions related to postpartum symptoms all showed significant improvements from pre to post intervention as well. Participants were significantly more likely to correctly identify normal postpartum symptoms such as differences in bladder control, night sweats, baby blues, and needing a nap on the post survey. Also, on the post-survey, participants were less likely to identify abnormal postpartum symptoms as normal, such as bleeding through more than a pad an hour, fever, extreme fatigue, non-stop crying, panic, and lack of interest in the baby.

Participants were able to demonstrate significantly increased knowledge about the benefits of full term pregnancy and truths about breastfeeding. Participants also reported significantly greater knowledge about "back to sleep" and safe sleep environment. They additionally demonstrated planned change in behavior, as there was a 15.1% increase pre (82.7%) to post (95.2%) intervention in those who reported planning to place their baby on his/her back to sleep, with 98.5% also reporting plans to place their baby in a safe sleep environment. This data strongly supports the benefit of the integrated safe sleep education component into the infant care session.

Table 2: Pre/Post-Intervention Answers to Knowledge Questions (percentage answering correctly)

Question	Pre-Survey (%)	Post-Survey (%)
Signs of Preterm Labor		
Contractions	76.2	86.4*
Color of discharge or bleeding	56.8	78.9*
Feeling that baby is pushing down	49.7	78.1*
Backache	45.8	72.1*
Belly cramps	33.8	65.6*
Cramps that feel like your period	47.3	72.4*
Should a pregnant woman do the following if she is experiencing preterm labor		

Call her health care provider right away	87.6	85.7
Stop what she is doing & rest on her left side for one hour	37.0	82.5*
Drink 2-3 glasses of water or juice (not coffee or soda)	37.0	74.2*
Do nothing, and wait for an hour or two to see if the symptoms go away	84.5	81.6
Postpartum Symptoms		
After discharge from the hospital, bleeding more than a pad in an hour	49.8	63.9*
Fever	81.4	85.1*
Difference in bladder control	54.2	72.3*
Night sweats	20.5	53.2*
Extreme fatigue	68.1	79.4*
Baby blues	50.9	75.4*
Non-stop crying	73.8	81.8*
Panic	70.1	80.2*
Needing a nap	66.3	81.9*
Lack of interest in baby	74.7	79.9*
Benefits of Full Term Pregnancy		
Full brain development	88.7	98.1*
Full lung development	88.5	95.1*
Less likely to be admitted to NICU	71.9	85.6*
Improved breastfeeding	61.3	79.1*
Truths about breastfeeding		
My baby will be less likely to have diabetes later in life	54.8	79.8*
I will lower my risk of some types of cancer	54.0	79.4*
Frequency of breastfeeding within the first 48 hours after birth can have an effect on producing enough milk	65.4	80.2*
My breastfeeding experience should not be painful	47.0	75.6*
Safe Sleep		
Baby sleep position (back)	82.7	95.2*
Baby sleep location (crib, bassinet or portable crib)	88.2	98.5*
*The differences between pre- and post- survey results were statistically significant (P<0.05). The participant needs to have a response in both the pre and post survey to be included in the table.		

Outcomes

The reported preterm birth rate (<37 weeks) was 9.9% for program participants (Figure 30). This was slightly higher than the state rate of 9.1%. About 8.0% of the births were low birthweight (less than 2500 grams), which was again slightly higher than the state rate of 7.0% (Figure 31). The percentage of babies born with low birthweight was slightly higher than the Healthy People 2020 target of 7.8%.[2] The differences were not statistically significant.

About 29.4% of the births for the BaM/Cb participants ended in a cesarean delivery, comparable to 29.5% of all 2016 births statewide (Figure 32). For the participants who had a cesarean delivery, the majority (91.0%) reported it was medically necessary/doctor recommended (Figure 33). Nearly one in two (45.4%) of BaM/Cb participants were induced, compared to one in three (30.9%) of all Kansas births in 2016 (Figure 34). Of the participants who were induced, 23.4% reported it was elective (Figure 35).

Nearly one in three (29.3%) of the participants reported having a medical condition (Figure 36). For participants with a medical condition, the most common type was high blood pressure/pre-eclampsia (43.4%), followed by gestational diabetes (33.0%) (Figure 37).

One in eight (12.7%) of the babies had a medical condition (Figure 38). Among babies with a medical condition, feeding or weight gain concern (34.6%), jaundice (33.3%), respiratory conditions (30.8%), and prematurity (10.3%) were the most commonly reported (Figure 39).

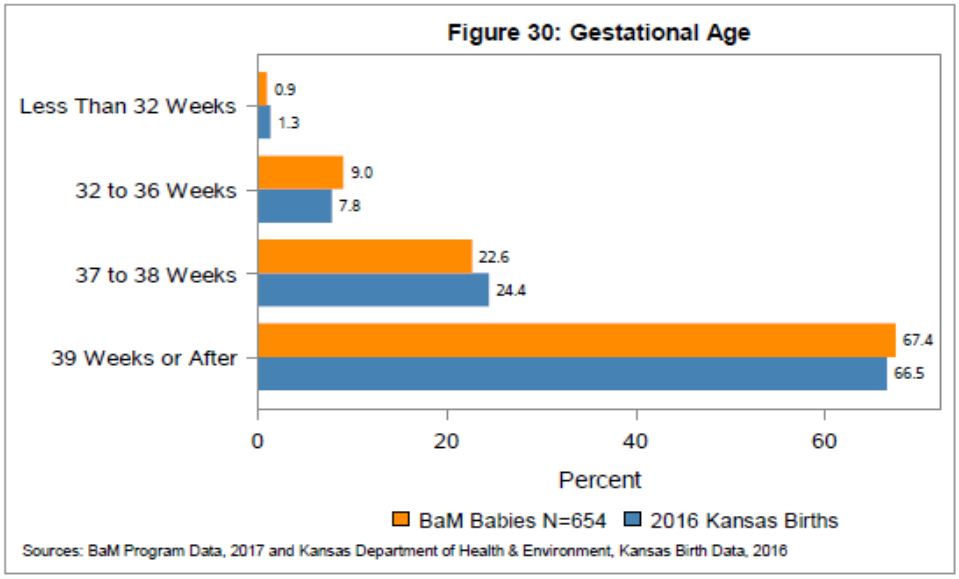
Breastfeeding initiation among program participants is at 94.1%, which was higher than the state rate of 88.1% (Figure 40). This was also higher than the Healthy People 2020 goal of 81.9% for infants who are ever breastfed.[2] Of the mothers who were still breastfeeding at the time of outcome survey completion, approximately two out of three (68.7%) reported exclusively breastfeeding their baby (Figure 41). This data demonstrates how outcomes are improved when education and support is gained through targeted interventions such as the Becoming a Mom®/Comenzando bien® (BaM/Cb) program and community partners are working together, as is demonstrated with the Kansas Perinatal Community Collaboratives (KPCC), to assure such resources are accessible in the community.

Most (80.2%) of participants reported continued use of a daily multivitamins after birth (Figure 42).

The majority (93.1%) of participants reported using a form of birth control (Figure 43).

Two-thirds (60.5%) of the babies were/would be insured by Medicaid (Figure 44).

The BaM/Cb program has connected the participants to many necessary services. The most popular services participants reported contacting or planning to contact include breastfeeding support (81.6%), car seat (77.2%), WIC (72.4%), and Medicaid (65.8%) (Table 3). This data supports the work that has been done across program sites to promote and integrate such resources.



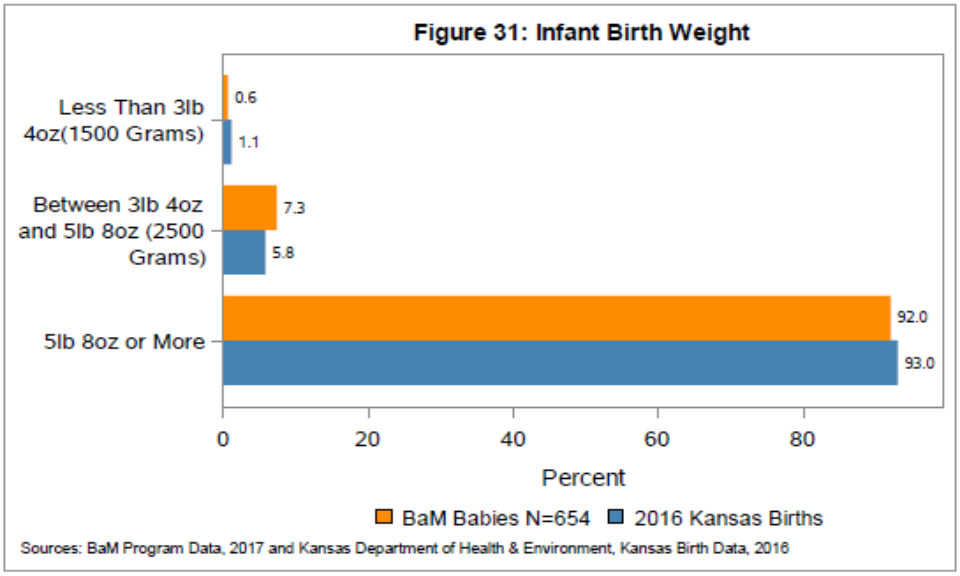


Figure 31: Infant Birth Weight
Less Than 3lb 4oz(1500 Grams)
Between 3lb 4oz and 5lb 8oz (2500 Grams)
5lb 8oz or More
0.6
1.1
7.3
5.8
92.0
93.0
0
20
40
60
80
Percent
BaM Babies N=654
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

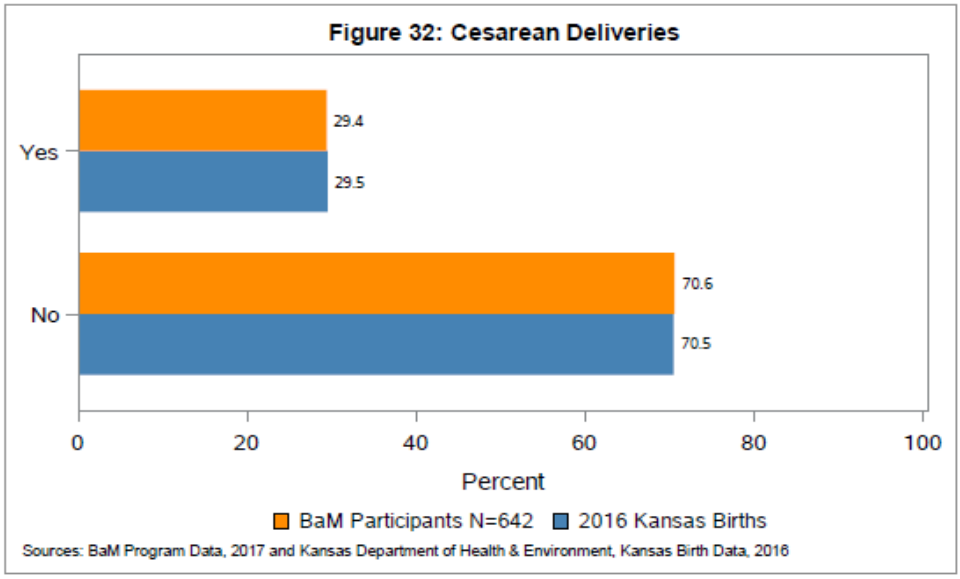


Figure 32: Cesarean Deliveries
Yes
No
29.4
29.5
70.6
70.5
0
20
40
60
80
100
Percent
BaM Participants N=642
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

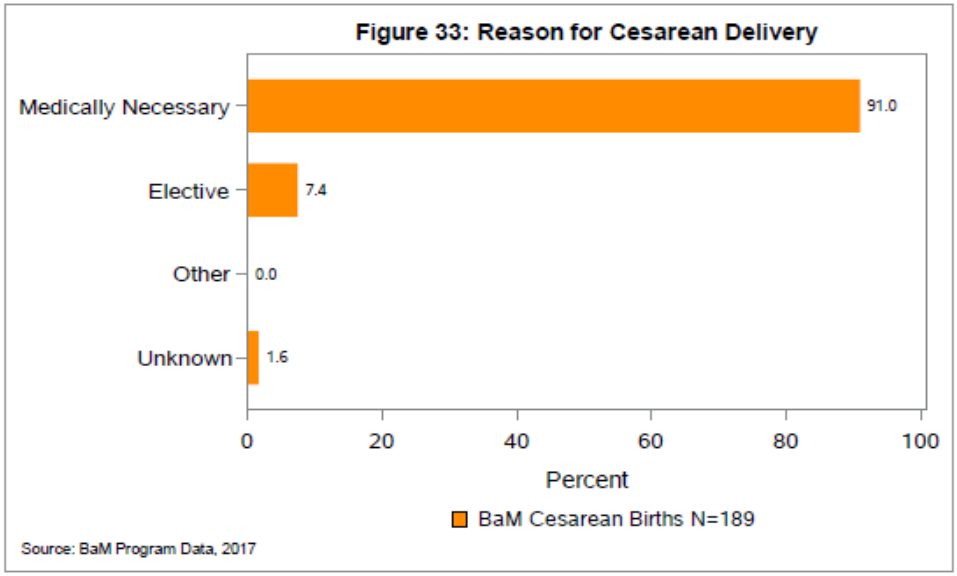


Figure 33: Reason for Cesarean Delivery
Medically Necessary
Elective
Other
Unknown
91.0
7.4
0.0
1.6
0
20
40
60
80
100
Percent
BaM Cesarean Births N=189
Source: BaM Program Data, 2017

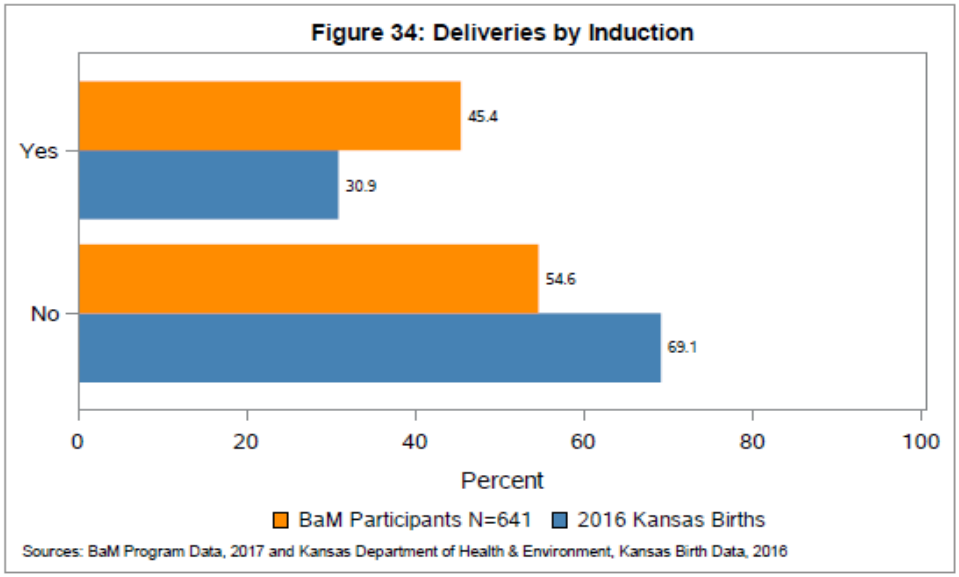


Figure 34: Deliveries by Induction
Yes
No
45.4
30.9
54.6
69.1
0
20
40
60
80
100
Percent
BaM Participants N=641
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

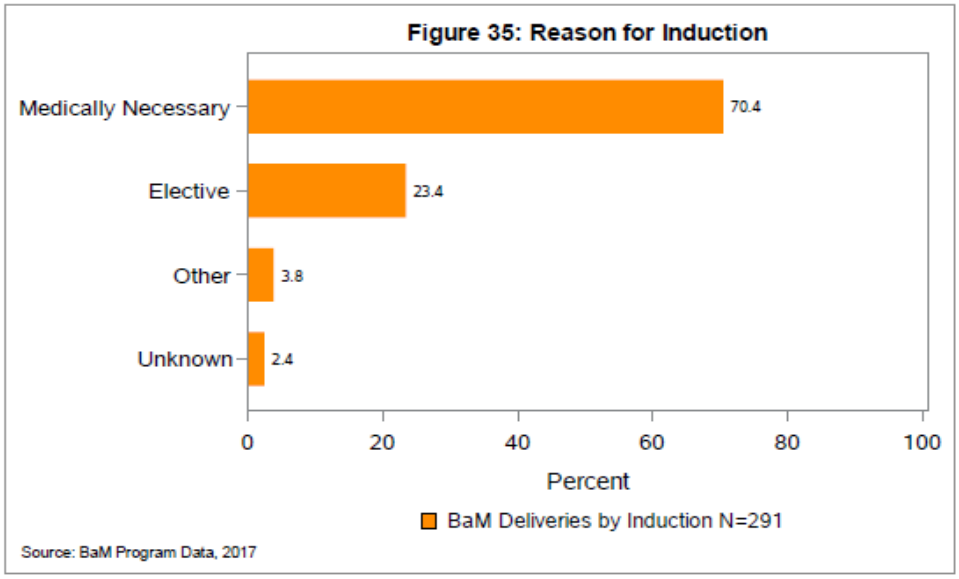


Figure 35: Reason for Induction
Medically Necessary
Elective
Other
Unknown
70.4
23.4
3.8
2.4
0
20
40
60
80
100
Percent
BaM Deliveries by Induction N=291
Source: BaM Program Data, 2017

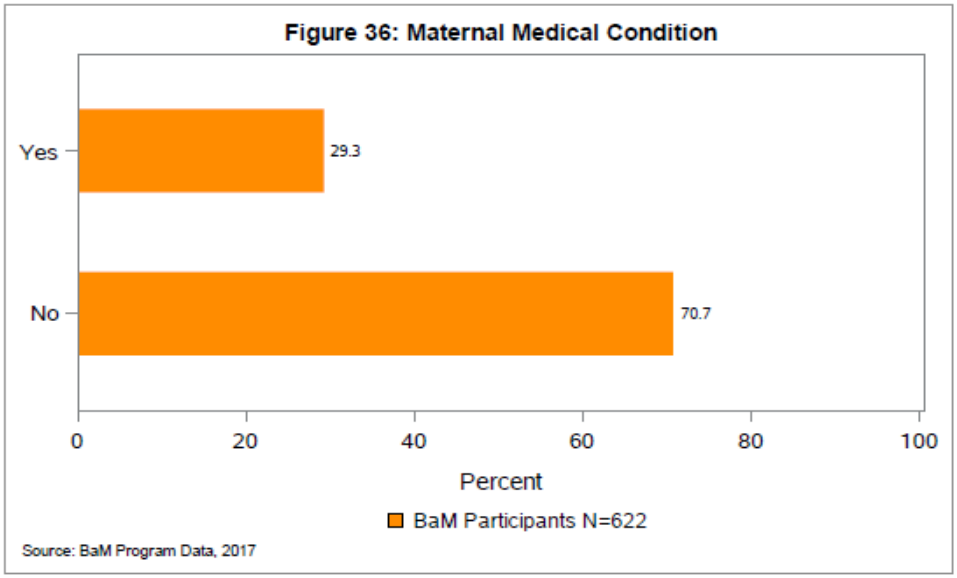


Figure 36: Maternal Medical Condition
Yes
No
29.3
70.7
0
20
40
60
80
100
Percent
BaM Participants N=622
Source: BaM Program Data, 2017

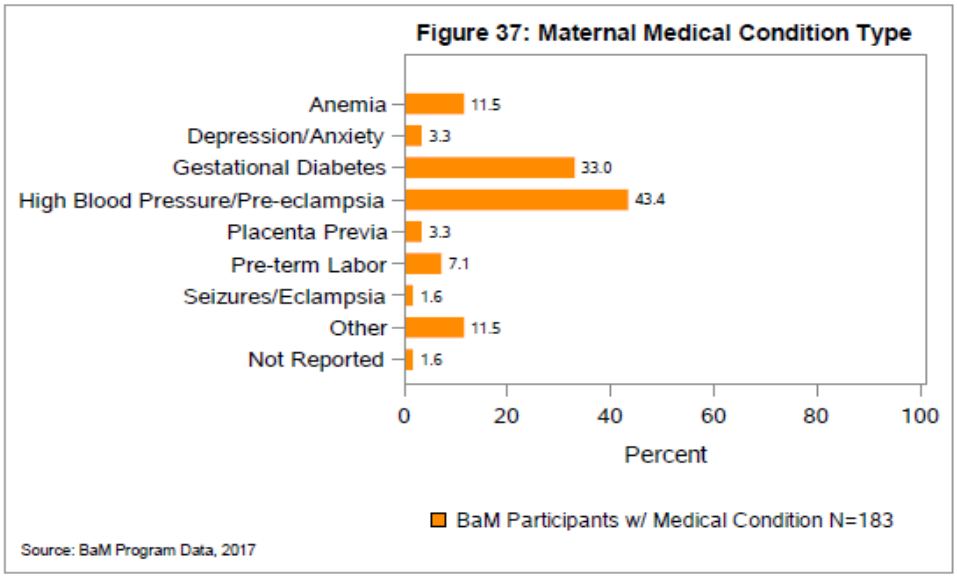


Figure 37: Maternal Medical Condition Type
Anemia
Depression/Anxiety
Gestational Diabetes
High Blood Pressure/Pre-eclampsia
Placenta Previa
Pre-term Labor
Seizures/Eclampsia
Other
Not Reported
11.5
3.3
33.0
43.4
3.3
7.1
1.6
11.5
1.6
0
20
40
60
80
100
Percent
BaM Participants w/ Medical Condition N=183
Source: BaM Program Data, 2017

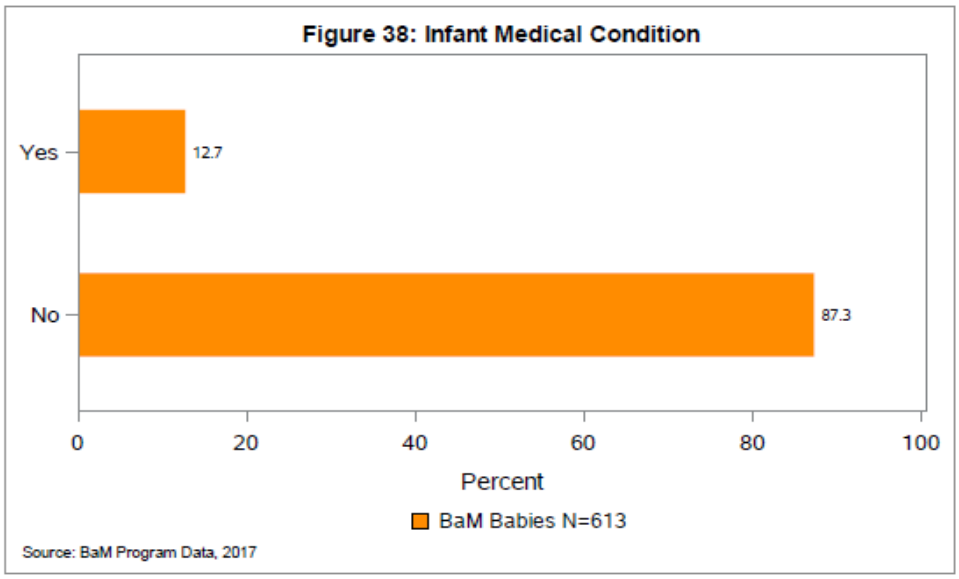


Figure 38: Infant Medical Condition
Yes
No
12.7
87.3
0
20
40
60
80
100
Percent
BaM Babies N=613
Source: BaM Program Data, 2017

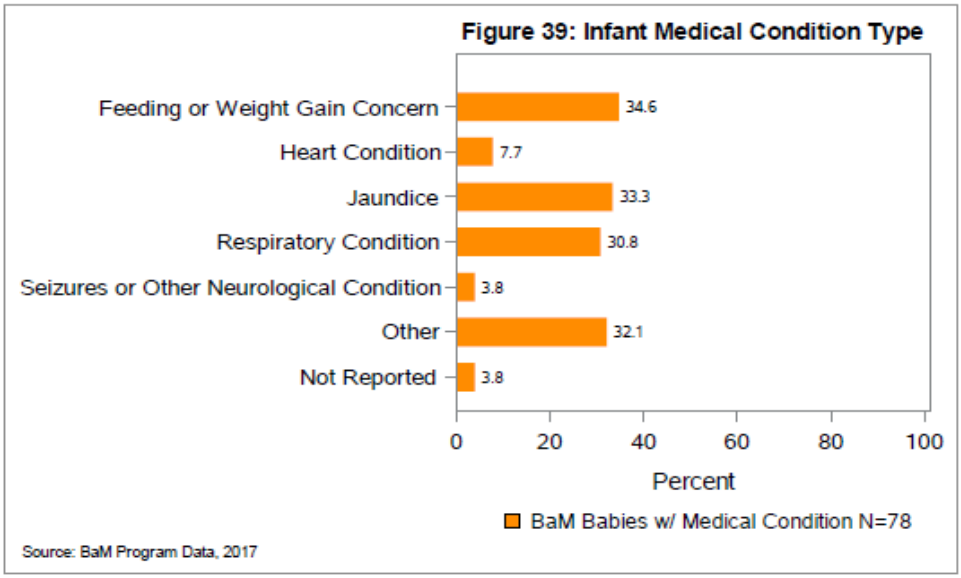


Figure 39: Infant Medical Condition Type
Feeding or Weight Gain Concern
Heart Condition
Jaundice
Respiratory Condition
Seizures or Other Neurological Condition
Other
Not Reported
34.6
7.7
33.3
30.8
3.8
32.1
3.8
0
20
40
60
80
100
Percent
BaM Babies w/ Medical Condition N=78
Source: BaM Program Data, 2017

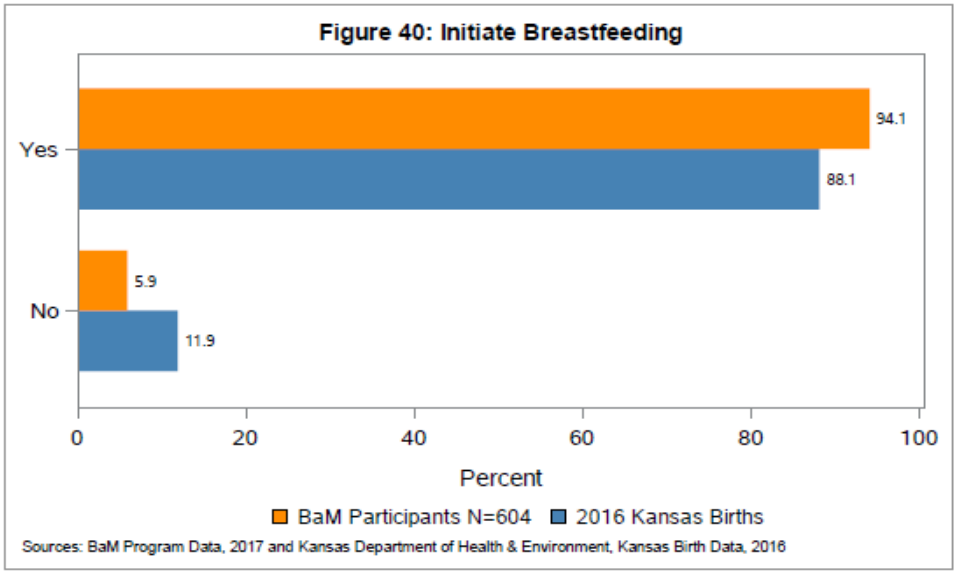


Figure 40: Initiate Breastfeeding
Yes
No
94.1
88.1
5.9
11.9
0
20
40
60
80
100
Percent
BaM Participants N=604
2016 Kansas Births
Sources: BaM Program Data, 2017 and Kansas Department of Health & Environment, Kansas Birth Data, 2016

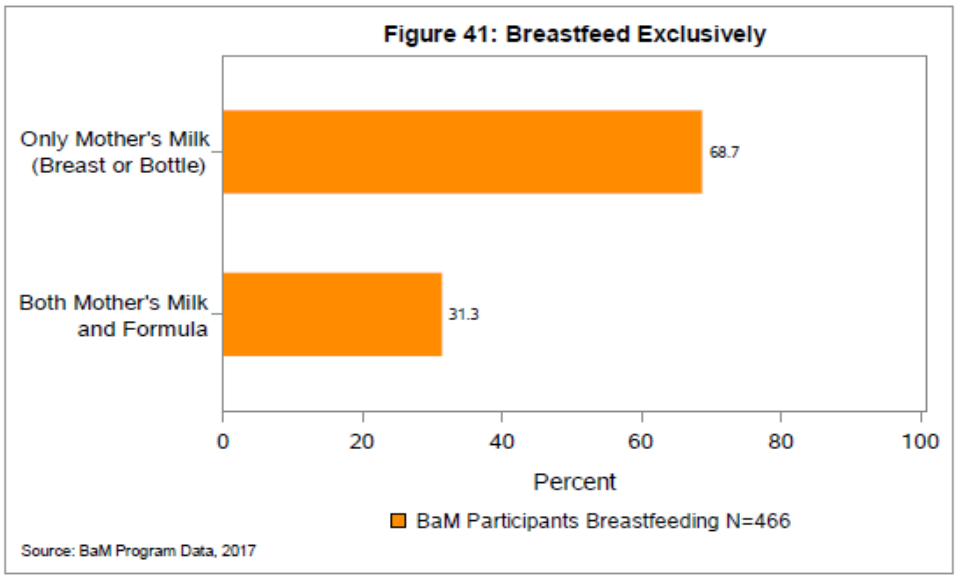


Figure 41: Breastfeed Exclusively
Only Mother's Milk (Breast or Bottle)
Both Mother's Milk and Formula
68.7
31.3
0
20
40
60
80
100
Percent
BaM Participants Breastfeeding N=466
Source: BaM Program Data, 2017

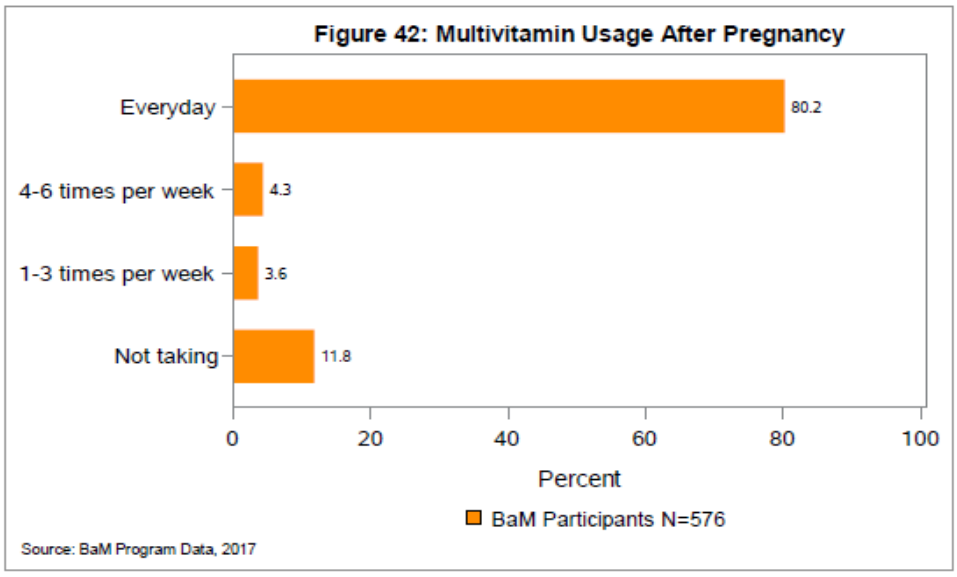
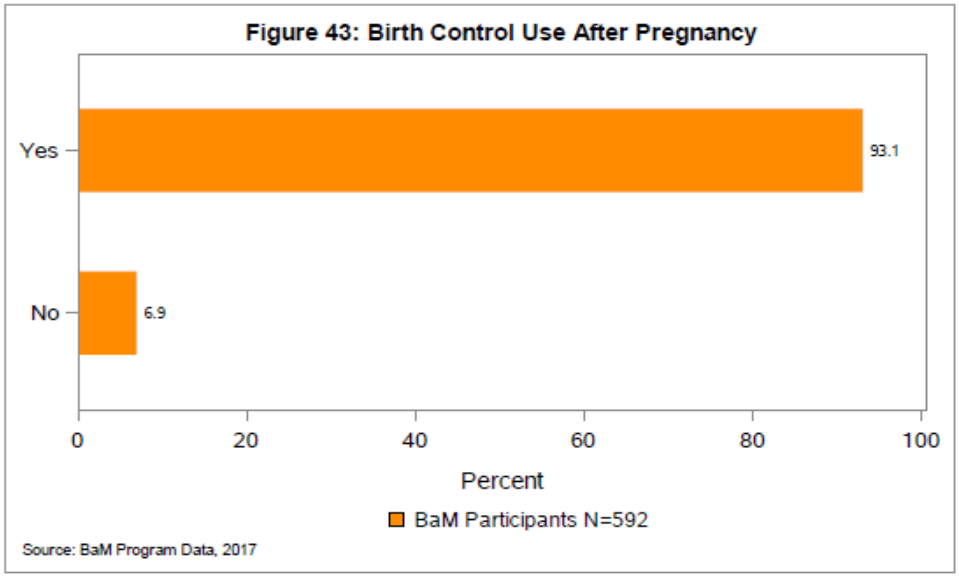


Figure 42: Multivitamin Usage After Pregnancy
Everyday
4-6 times per week
1-3 times per week
Not taking
80.2
4.3
3.6
11.8
0
20
40
60
80
100
Percent
BaM Participants N=576
Source: BaM Program Data, 2017



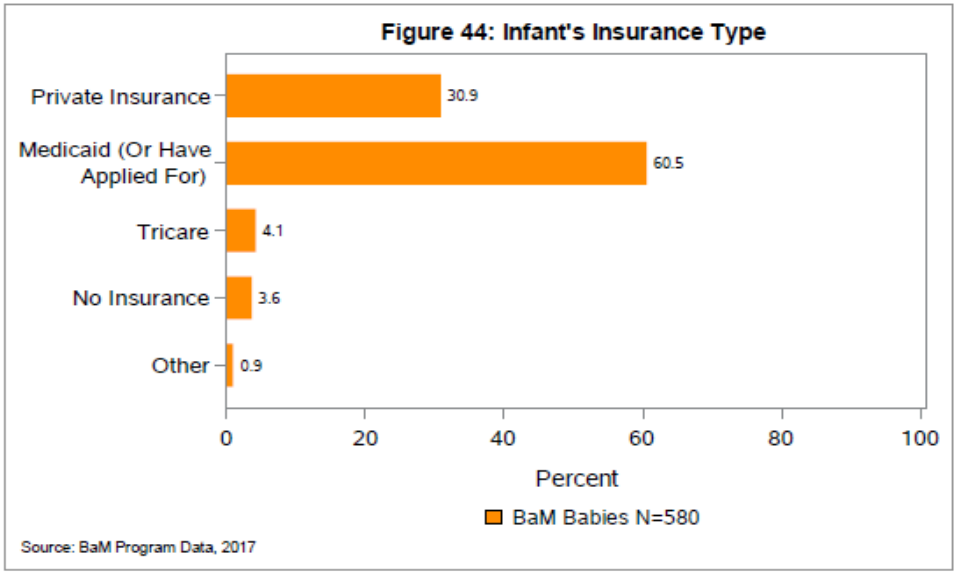


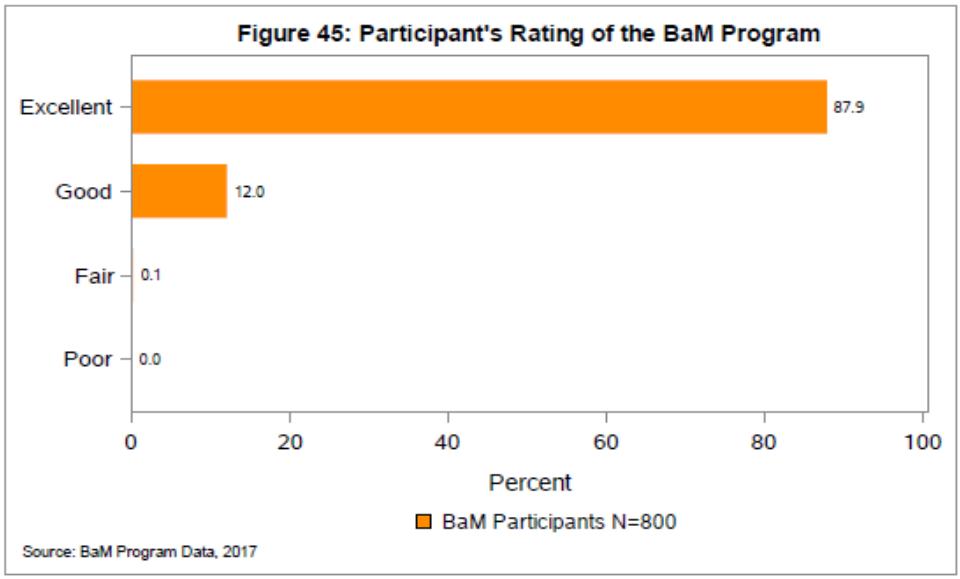
Table 3: Intent to Contact Community Services/ Programs

Program	Have Contacted/ Plan to Contact Percent (N)	Did Not Plan to Contact Percent (N)	Total Respondents	Skipped Question (Number of Respondents)
Breastfeeding	81.6% (639)	18.4% (144)	783	20
Car Seat	77.7% (607)	22.3% (174)	781	22
Childcare	44.8% (351)	55.2% (433)	784	19
Domestic Violence Prevention	4.3% (33)	95.7% (741)	774	29
Healthy Start	55.4% (433)	44.6% (349)	782	21
Housing	15.7% (122)	84.3% (654)	776	27
Medicaid	65.8% (516)	34.2% (268)	784	19
Mental Health	27.2% (210)	72.8% (563)	773	30

Parenting	62.2% (483)	37.8% (294)	777	26
SIDS Network	22.8% (175)	77.2% (593)	768	35
Substance Abuse	6.7% (51)	93.3% (714)	765	38
Tobacco Cessation	7.5% (58)	92.5% (716)	774	29
Transportation	13.7% (106)	86.3% (669)	775	28
WIC	72.4% (571)	27.6% (218)	789	14
Other Pregnancy Resource	42.9% (331)	57.1% (441)	772	31
Other Resource	31.9% (217)	68.1% (463)	680	123
N is number of respondents				

Evaluation

Overall, the BaM/Cb participants rated their experience in the program positively, with 87.9% rating their experience as excellent (Figure 45). Participants also favorably evaluated the social support component (Figure 46 and Figure 47) and ease of understanding the material (Figure 48). Most participants reported they had learned “a lot” (76.3%) and “some” information (23.6%) from the program (Figure 49). All six sessions were considered to be helpful; every session had more than 80% of the participants rate the session as “very” or “extremely” helpful (Table 4).



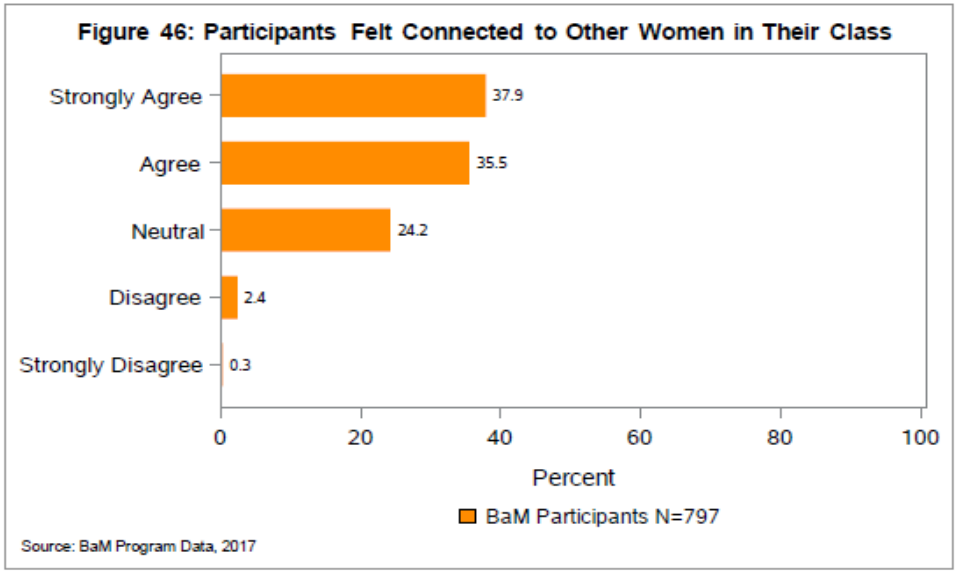


Figure 46: Participants Felt Connected to Other Women in Their Class
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree
37.9
35.5
24.2
2.4
0.3
0
20
40
60
80
100
Percent
BaM Participants N=797
Source: BaM Program Data, 2017

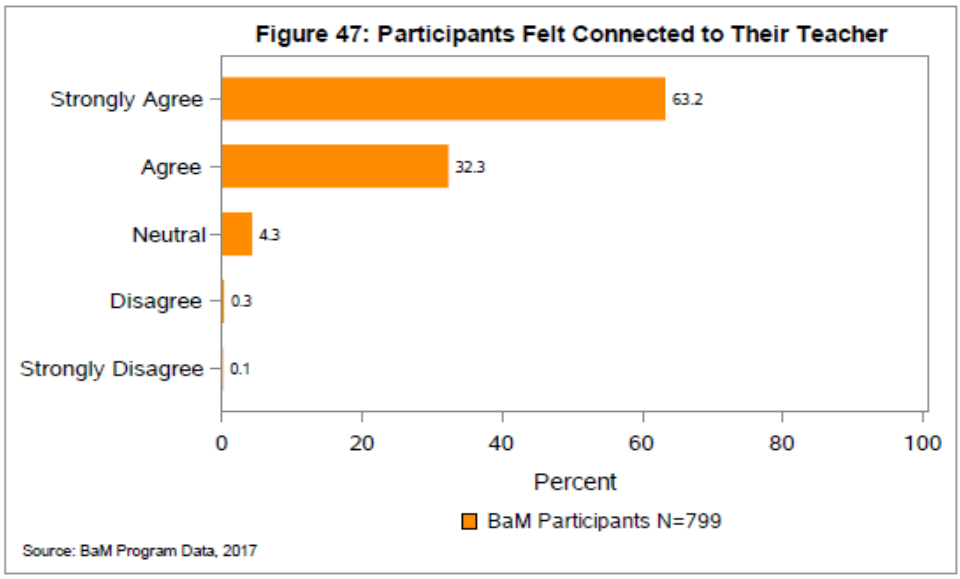


Figure 47: Participants Felt Connected to Their Teacher
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree
63.2
32.3
4.3
0.3
0.1
0
20
40
60
80
100
Percent
BaM Participants N=799
Source: BaM Program Data, 2017

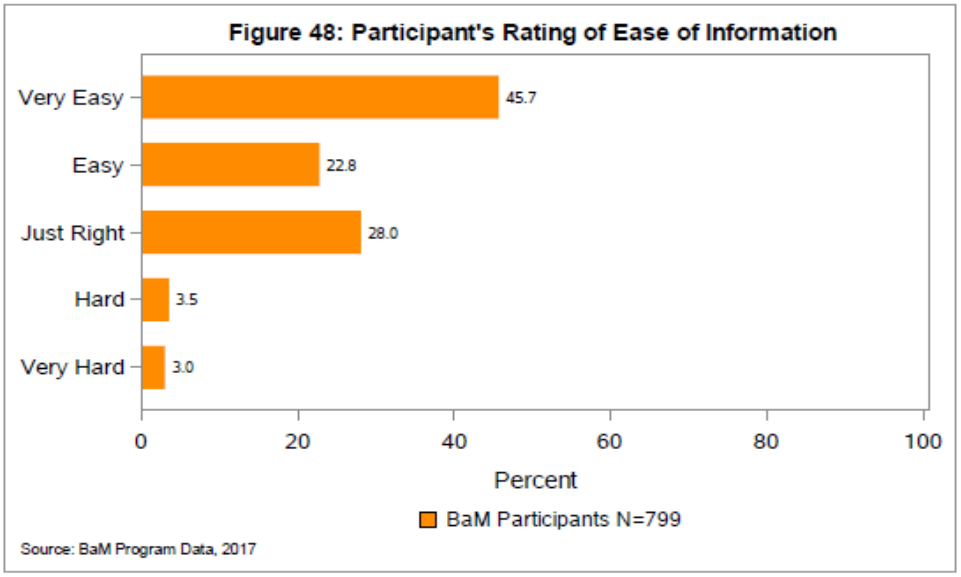


Figure 48: Participant's Rating of Ease of Information
Very Easy
Easy
Just Right
Hard
Very Hard
45.7
22.8
28.0
3.5
3.0
0
20
40
60
80
100
Percent
BaM Participants N=799
Source: BaM Program Data, 2017

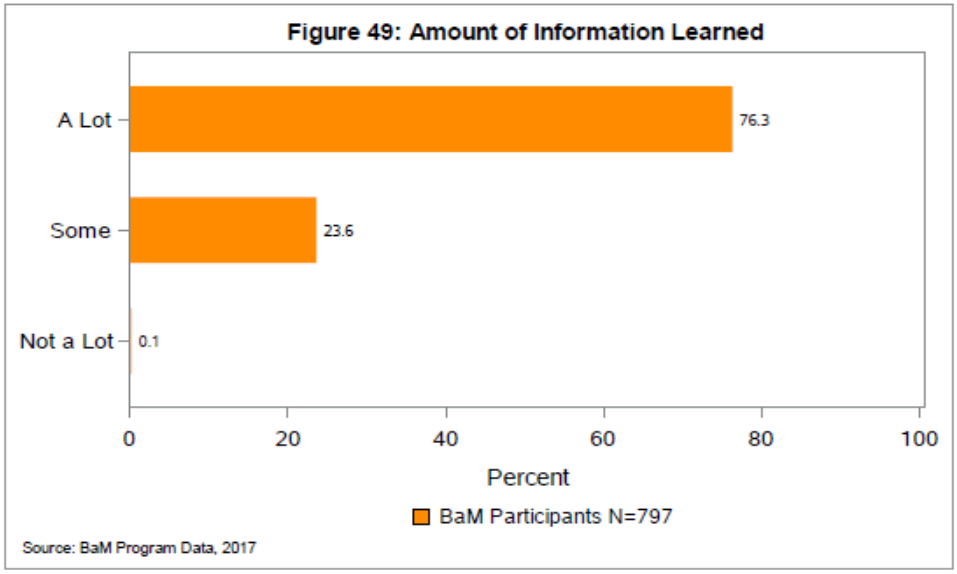


Table 4: Evaluation of the Becoming a Mom®/Comenzando bien® Sessions

Rating on the helpfulness of the session:						
	Not at all	**A little**	**Somewhat**	**Very**	**Extremely**	**Did not attend session**
	Percent (N)	**Percent (N)**	**Percent (N)**	**Percent (N)**	**Percent (N)**	**Percent (N)**
Prenatal Care	0.5% (4)	4.0% (32)	9.4% (75)	45.5% (363)	36.5% (291)	4.1% (33)
Pregnancy Health	0.6% (5)	4.5% (36)	9.8% (78)	42.8% (341)	38.9% (310)	3.4% (27)
Labor and Delivery	0.1% (1)	1.4% (11)	4.0% (32)	34.7% (277)	58.2% (465)	1.6% (13)
Infant Feeding	0.4% (3)	0.7% (6)	3.4% (27)	31.5% (251)	61.5% (491)	2.5% (20)
Infant Care	0.0% (0)	0.9% (7)	4.1% (33)	36.1% (287)	56.7% (451)	2.3% (18)
Postpartum Care	0.0% (0)	0.8% (6)	5.0% (40)	38.1% (303)	53.1% (423)	3.0% (24)
N is number of respondents						

Recommendations

The data analysis and evaluation design provide important measures for the Becoming a Mom®/Comenzando bien® (BaM/Cb) program and community collaborative model in Kansas. As with all program evaluations, there are opportunities for improvement. The evaluation team from Kansas Department of Health and Environment has provided the following recommendations based on the results from 2017 data.

- Upon program intake, 15.2% of BaM/Cb participants reported depression/anxiety as a chronic health condition, while 20.5% scored for referral upon screening with the Edinburgh Postnatal Depression Scale during the program, and 27.2% report having contacted or planning to contact mental health services upon program completion. Evaluation also shows significant change in the

beliefs or attitudes of BaM/Cb participants around depression/anxiety during and after pregnancy. A significant increase in the number of participants who report being very likely or likely to talk with their healthcare provider and/or access available resources, as well as significantly increased participants' knowledge of mental health resources in their community pre-to-post program, demonstrates the true benefit of integration efforts that have been made by Kansas programs. Continue with integration efforts around mental health, working with Wichita State University Community Engagement Institute to promote and expand practices and interventions to improve outcomes in this targeted area. State partners should continue to support local communities with expanded resources and increased training opportunities. In communities where screening is taking place, local program staff should be working with community partners to provide follow-up and assure women are not falling through the cracks once screened and referred. In communities where screening is not yet taking place, partners in the perinatal community collaboratives should be leading the way to implementation, assuring an adequate system of care is being built to appropriately care for women identified at risk.

- While 5.4% of participants reported being a smoker upon program intake, there were minimal rates of cessation (1.3%) by program completion. Continue to build integration efforts and partnerships around smoking cessation. Consider surveying current and former BaM/Cb participants who are smokers, as to what kind of services, support, and incentives might better encourage and support them in their cessation efforts. Expand locally provided cessation programs such as Baby and Me Tobacco Free (BMTF) and Smoking Cessation Reduction in Pregnancy Treatment (SCRIPT). Strengthen partnerships with BaM/Cb participant prenatal care providers and among other perinatal community collaborative partners to assure screening and messaging around the importance of smoking cessation is consistent, strengthen referral and follow-up systems, and support the use of Nicotine Replacement Therapy (NRT) when indicated.

- Continue to support and monitor WIC participation rates. Consider follow-up integration training as needed by program sites. Additionally, focus on Medicaid related integration efforts over the next year. KDHE will continue to work with Managed Care Organizations (MCOs) to create a streamlined direct referral process and consider coverage of transportation to BaM/Cb educational sessions as well as other rewards as a part of their existing value-added services. Local program staff should consider exporting DAISEY data to identify women who are potentially income eligible for WIC and Medicaid who currently reported not utilizing these resources, to assist in linkage with services. KDHE staff can provide additional TA support with these efforts if needed.

- Focus on curriculum delivery regarding the importance of exercising 30 minutes or more a day for at least 4 times a week, as well as continued reinforcement of the need for daily folic acid intake, including during the interconception period and throughout all potential childbearing years. Assure review of the handout “Recommended exercises during pregnancy” that was incorporated in the 2017 curriculum relaunch. KDHE will seek program site feedback on utilization of the “Pregnancy Exercise and Nutrition Program” (PEP) content and barriers to implementation, in an effort to better identify needs and how KDHE can assist. Seeking participant feedback in this topic area by local program staff is recommended to identify what it is that will truly motivate women

to make greater positive change in this area. Identifying useful/beneficial resources for women is key in reducing complications and risk factors for developing diabetes and high blood pressure later in life.

- Compared to the most recent 2016 Kansas births, the 2017 BaM/Cb preterm birth and low birthweight rates were slightly higher, although the differences were not statistically significant. These rates should continue to be monitored and compare with 2017 Kansas birth data as soon as it is released from the Office of Vital Statistics Data Analysis.

- The induction rate among BaM/Cb participants (45.4%) was significantly higher than the 2016 Kansas Births (30.9%). Furthermore, 23.4% of the BaM/Cb inductions were also reported as elective, as well as 7.4% of the cesarean deliveries. This certainly provokes interest in conducting a focus group to better understand women's rationale behind these choices. KDHE will: identify sites with high elective induction and elective cesarean delivery rates; further investigate data to compare with gestational age, complications, etc. to look for any trends or explanations; continue to monitor rates in the next year as well as compare to 2017 birth data as soon as it is released; consider assisting with possible local focus groups in identified locations. Local program staff should: focus on curriculum delivery to discourage elective inductions and elective cesarean delivery; assure showing of brief video clip "Is It Worth It" that was imbedded in the session 3 PowerPoint during the 2017 relaunch; discuss trends with perinatal community collaborative partners; consider participating in above mentioned focus groups.

- Although demographics of BaM/Cb participants shows an improved reach across disparity groups, state technical assistance and integration efforts as well as local collaborative and recruitment efforts should continue to focus on recruitment of the Medicaid and uninsured populations, minority groups, and lower education populations, to better reach the targeted "disparity" population the program is aimed at, further driving the rate of improvement in outcomes.

- Minor changes to the DAISEY evaluation tool are recommended for July 2018 revisions. "Work/School" will be an added selection option for the question asking what prevents them from attending their prenatal care appointments. Out of the 2.7 % of women who selected "Other", 55.0% mentioned work. This is a small percentage of the overall BaM/Cb participants but is still valuable information to consider in program planning. In addition, "Prematurity/LBW" should be an added selection option for the question asking the infant's medical conditions/concerns which required NICU admission. Out of the 32.1% who selected "Other", 10.3% mentioned prematurity.

- While BaM/Cb outcome data demonstrates sites are highly successful in educating, encouraging and supporting participants to initiate breastfeeding and breastfeed exclusively, more can be done to support exclusivity and duration rates. Timing of completion of the outcome survey varies from the first week to 8 months postpartum. The question related to breastfeeding exclusivity does not have a set timeframe and therefore cannot be compared to Healthy People 2020 targets or other data sources. Sites currently do not collect information from BaM/Cb participants regarding breastfeeding duration at the 6 month and 1 year mark or breastfeeding exclusivity at 3 or 6 months, which are Healthy People 2020 measures. Recommendations would include the

development of a tool to be used by BaM/Cb program staff or partner agencies to provide follow-up at targeted time frames throughout the first year when statistics show women are most likely to begin supplementation or discontinue breastfeeding. This allows the opportunity to provide greater support and resources to BaM/Cb participants, as well as collect data regarding continuation and exclusivity rates.

- As mentioned above, timing of completion of the outcome survey varies and obtaining the outcome data has been challenging. A recommendation is to collaborate with the Office of Vital Statistics Data Analysis to develop and utilize linked BaM/Cb participant data to vital records: birth, stillbirth, infant death.

- Currently 21.3% of BaM/Cb participants enter the program in their third trimester, while first thru second trimester are recommended points of entry. Target recruitment efforts across BaM/Cb sites to encourage earlier provider referral and entry of pregnant women into the program.

- Program sites are encouraged to assess and consider recommendations made by program participants via the "additional feedback" portion of the Completion Survey. Most of these appear to be site specific and therefore will not be presented in this aggregate report but could bring value to individual programs. Additionally, KDHE will assess for any common themes across program sites that could be addressed at a higher state level.

- Sites are encouraged to continue focusing on "family/consumer engagement" in SFY2019, including BaM/Cb participant/alumni representation on advisory boards, maternal and child health councils, perinatal collaboratives, etc. to gather feedback and input on the program from the consumers themselves. Remember the saying "nothing about us, without us".

- Overall the BaM/Cb program was rated very highly and the information was reported as easy to understand. Continue effective delivery of program materials with improvements incorporated as described and recommended above. Curriculum standardization and enhancement efforts that involve the development of supplemental curriculum handouts, PowerPoints, lesson plans, activity plans have been completed. Sites are encouraged to communicate suggested edits to KDHE for incorporation in July 2018 updates.

References

1. U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates. Language spoken at home. Table S1601. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF [accessed April 23, 2018].

2. US Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Available at: https://www.healthypeople.gov/2020/data-search/Search-the-Data#topic-area=3492 [accessed January 25, 2017].